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Migration and labor market: literature, facts and an analysis of a particular case

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Abstract

The growth of the migration phenomenon has resulted in the growth of literature aimed at explaining its causes and effects. On the one hand, there seems to be a bidirectional relationship between causes and effects; on the other hand, the link between migration and the labor market seems to characterize most studies on migration flows. After analyzing global trends related to the migration phenomenon, I investigated these two links, between causes and effects and between migration and the labor market. In the first case, through a review of numerous contributions by economists, I found that most of them assign the effects on migrants in destination countries a crucial role in determining the causes of subsequent migration. In the second case, through a multinomial regression analysis on data for the region of Lombardy, I analyzed the labor positioning of sub-Saharan immigrants in Lombardy in the years 2001 and 2016 as a function of individual attributes of gender and educational level and compared the results with other immigrants. I found that that the occupational status of people with sub-Saharan African citizenship compared to people from the rest of the world has changed significantly between 2001 and 2016. Sub-Saharans have become significantly more likely to be not in employment in 2016 compared to 2001. In addition, compared to 2001 in 2016 there is not a difference anymore in gender amongst the different occupational statuses of people from Sub-Saharan Africa. Finally, both in 2016 and in 2001 the occupation of Sub-Saharan citizens does make a difference in the level of education one has, with people who have registered employment being significantly more likely to have higher levels of educational achievements.

Keywords: migration; labor market; determinants of migration; effects of migration; sub-Saharan migration; Italian labor market; Italian immigration

Introduction

Migration has characterized populations for millennia. However, in recent decades it has become increasingly large, thanks to reduced transport costs and increased travel possibilities due to technological progress. The increase in the size of migratory flows is accompanied by widespread hostility towards immigrants in the main host countries (Pew Research Centre, 2018), partly due to controversial information. Indeed, the numbers concerning the share of foreign-born individuals in the total resident population are often exaggerated, their religious and cultural differences amplified, and the education levels and socio-economic integration of migrants underestimated (Alesina, Miano and Stancheva, 2019). These distorted perceptions suggest that providing more accurate information could reduce hostility towards migrants (Grigorieff, Roth and Ubfal, 2020).

Destination countries tend to regulate migrant flows through migration policies aimed at setting maximum quotas for the admission of foreign nationals and selecting eligible migrants on the basis of national labor market needs. The outcome and effectiveness of the selective policies adopted by some countries (e.g., Canada, Australia, the United States and the United Kingdom) depend crucially on their interaction with the spontaneous selection of individuals to migrate from their countries of origin (Fasani, Llul and Tealdi, 2020).

"Forced" migration flows – i.e., driven by war events, persecution, or environmental disasters – in turn, hamper the effectiveness of migration policies, as they often take place through illegal channels, mostly by sea or land. A large influx of refugees characterized Europe especially between 2015 and 2018, with hundreds of thousands of refugees from Africa, Syria, Afghanistan, Iraq and other countries reaching European countries to seek humanitarian protection from political persecution, war and violence. This has led to annual increases in immigrant quotas of the order of one percentage point in some of the European countries of destination origin (Fasani, Llul and Tealdi, 2020). The current Ukrainian crisis has resulted in the displacement of almost 7 million refugees to neighboring countries (6,801,987 according to UNHCR data as of 29 May 2022), while the refugee crisis in Venezuela has resulted in more than 5.2 million expatriates.

The undocumented immigrant population is also particularly relevant, as in 2019 an estimated 4-5 million undocumented immigrants lived in Europe (12-16% of the total

non-EU immigrant population) and 10.5 million in the US (23% of the foreign-born population) (Pew Research Centre, 2019a, Pew Research Centre 2019b).

The growth in the size and complexity of the migration phenomenon has been accompanied by the growth of the economic literature on migration and many of these issues have been analyzed. Moving from the study of internal migration – typically from the countryside to the city – to actual international migration, the authors – not only economists, but also geographers, sociologists and humanists from various disciplines – have dealt with two major macro-areas: the set of causes of migration and the set of effects.

Among the causes of migration, a distinction can be made between causes of "force majeure" – such as persecution, conflict, or environmental disasters – that force people to migrate elsewhere and causes that are more directly dependent on people's will. Most of the literature, especially economic literature, on the causes of migration has focused on the latter type, to understand the determinants of the choice to migrate. On the other hand, the effects of migration have also been deeply analyzed in literature. These effects include those on both sending and receiving countries, as well as broader effects on global demographic trends or the impact of migration on climate and the environment. A great attention has been paid to the link between migration and labor market, which seems to be the main determinant of voluntary migration flows and the main studied effect of migration at the same time.

While the effects of migration affect various sectors, including labor market, welfare, taxation and FDI market, migration is influenced itself by the characteristics of the countries of origin and destination of the flows. Indeed, the causes of migration lie often in the differences between the labor markets of these countries, or between other country-specific features such as welfare and taxation or amenities. Understanding this two-way relationship between migration and the characteristics of countries of origin and destination is important to better address the issues that are often at the center of political-economic debate related to migration and to find more effective responses geared toward maximizing the overall welfare of migrants and natives.

The overall objective of this thesis is to improve the knowledge of the migration phenomenon, first in its complexity – in the first and second chapters – and then through

the study of a specific case – in chapter III. My goal is to understand the two-way relationship between cause and effects of migration.

The thesis is organized as follows. In the first chapter, I will describe the main characteristics and trends relating to various aspects of the migration phenomenon, comparing current data with past data in order to understand how migration is evolving and which countries and peoples are most affected. After a first general part with a global scope, in the second part I will focus on a breakdown by region and deepen the discussion with special reference to sub-Saharan migration. Finally, I briefly describe some typical dynamics of the immigrant labor market in Italy.

In writing this chapter, I relied heavily on databases and reports made available by major institutions and organizations dealing with migration globally, such as IOM, UNHCR, UN DESA and ILO, or regionally, such as African or European Union. The chapter is dense with data, which I have organized into tables and described in the text. One of the main findings of the research work conducted for chapter one is that it shows that most migrants are workers (62 % in 2019). This finding influenced the identification of the perimeter of the research conducted in the following chapters, which mainly relates to the link between migration and the labor market.

Chapter II provides a review of the literature, mainly economic, aimed at understanding the bidirectional relationship between migration and the characteristics of countries of destination. The main question I asked my self is: given the two-way relationship between determinants (causes) and effects (consequences) of migration, which effects "weigh" more heavily on the decision to migrate according to the literature? The effects on natives, the effects on migrants, or the overall effects? Given the large number of contributions in the literature, I divided the chapter in three parts.

First, I will go through many of the contributions that have been made to understanding the choice to migrate, with a focus on the determinants related to the migrant as a worker, but also as a consumer and as part of a supra-individual entity (such as family). The question I will therefore ask is: how has the decision to migrate been explained in the literature? To answer this question, I will review the main theories that, since the 18th century, have described the mechanisms that affect a person's decision to migrate. These theories include labor market competition theory, human capital theory and some non-labor market theories such as those relating to public goods or family ties.

In the second part of the chapter, I will focus on the literature about the effects of migration on natives in the destination countries. The questions is: what happens after moving to another country, in the country of arrival, and on which groups do the various effects occur? In order to answer this question, I will examine studies that explain the various effects of a migration flow in the destination country. I will distinguish between labor market effects, which mainly concern changes in average wage levels or employment rate, effects on economic welfare (e.g., with regard to the FDI market), and effects on native attitudes toward immigrants.

In the last part of the chapter, I will instead focus on the literature on the effects of migration on immigrants in the destination countries, with particular regard to their labor market outcomes, trying to answer the question: how and through which channels does the positioning of immigrants in various occupations take place? To this end, I reviewed some of the main theories explaining the outcome of migrants in the labor market and examined in depth some contributions related to the phenomenon of niching and social networks.

In chapter III, I will focus on the study of a particular case. I develop a study aimed at capturing some aspects of the positioning of the sub-Saharan community in the labor market of Lombardy, comparing to immigrants from other coutries. The reason why I focused on this particular community is twofold: on the one hand, the very lack of literature on this precise topic prompted me to want to explore it in order to start a small strand of research on this issue, with a view to a greater future in-depth study on the individual nationalities that make up the sub-Saharan community; secondly, in the last decade Italy has been increasingly involved, even if not constantly, in the flows of people from sub-Saharan countries, also as a transit country, and therefore knowledge of the dynamics affecting these nationalities becomes more important - both for scientific and policy purposes.

In order to expand the knowledge on the positioning of sub-Saharan immigrants in the Italian labor market, I have chosen some aspects that I consider significant for the analysis. Initially, I will investigate how the employment status of sub-Saharans differs from that of immigrants of all other nationalities. I will then focus on certain characteristics of sub-Saharans - gender and educational level - with the aim of investigating correlations with the employment status of immigrants who possess them.

Therefore, one of the questions I will ask myself is: is there a correlation between a particular gender or level of education, and better employment performance for sub-Saharan immigrants?

Next, I will compare the results of these analyses intertemporally, to see what variations there had been between the employment situation of immigrants before and after the 2008 economic crisis. For this type of analysis, I will take some indicators of labor performance - unemployment, irregular employment and employment rates - divided by gender and educational level and compare them both at an inter-subjective level, i.e. between sub-Saharan immigrants and other immigrants, and at an inter-temporal level, i.e. between 2001, which represents the pre-crisis situation, and 2016, which represents the post-crisis situation. In this case, the questions I asked myself are: how did the labor situation of immigrants change after the 2008 crisis? Have the correlations between gender and educational level, on the one hand, and employment status, on the other hand, remained stable or changed? Has the crisis had similar or different effects on sub-Saharan immigrants compared to other immigrants?

1. Context

Many factors – such as technological, environmental, and geopolitical factors – influence the size of migration flows and stocks. Since 2005, the technological advances that led to the so-called "fourth industrial revolution" are profoundly changing the way social, political, and economic systems operate globally, and this also affects migration: people use apps on their mobile phones to collect and share information in real time in order to connect geographically dispersed groups. While this information provides more opportunities for irregular migration, it also allows those who have it to avoid migrant and human traffickers (McAuliffe, 2016).

Other applications developed thanks to migrants promote better integration in host countries and make it easier to send remittances to families in countries of origin, provide psychological and legal-administrative support (e.g., to help navigate complex migration policies and visa requirements), although in some cases this is raising concerns about privacy and other human rights issues. Recent discussions have also focused on blockchain technology and its impact on migration, particularly for international remittances, but also for digital identities, degree recognition and global mobility (Latonero et al., 2019).

Events of a geopolitical nature also inevitably affect migration flows, as is sadly evident when looking at the events unfolding in Ukraine. Although economic, political and military power is now more evenly distributed in the international system, important differences still remain. These differences lead to increasing geopolitical competition, especially between global powers, often played out through proxies (e.g. Ukraine), which in turn leads to increased migration, especially of refugees. Geopolitical events that took place in other parts of the world - such as in Venezuela, Syria, Yemen, the Central African Republic, the Democratic Republic of Congo and South Sudan triggered by weather catastrophes in many parts of the world, including China, the Philippines, Bangladesh, India, the United States of America and Haiti - also led to the displacement of millions of people (IDMC, 2021).

Moreover, events related to the COVID-19 pandemic have influenced migration flows downwards over the past two years. From the perspective of international mobility, globally 108,000 COVID-related international travel restrictions were imposed IOM,

2021a (as of 8 March 2021) and the number of air passengers was reduced by 60% in 2020 (1.8 billion) compared to 2019 (4.5 billion) (ICAO 2021).

Migration is a dynamic phenomenon in which causes and effects follow one another interdependently. The decision (or compulsion) to migrate often depends on the characteristics of the destination country. At the same time, the flow of migration to destination countries affects the characteristics of the country itself (as well as the country of origin). This two-way relationship between causes and effects of migration is the focus of my research work. in this chapter I will therefore go on to describe the main characteristics of the migration phenomenon, as a basis for a more analytical study carried out in the next two chapters.

The chapter is organized as follows. Section 1.1 gives an overview of the main characters of the migrant population, with regard to the definitions used globally, and then analyzes in more detail the aspects related to the specific category of refugees and IDPs. Section 1.2 describes the main global trends related to migration, including reference to so-called migration corridors. Section 1.3 focuses on labor migration, showing data on labor migrants and remittances to countries of origin. Section 1.4 describes regional trends in migration in depth and broken down by continent, with an in-depth look at sub-Saharan migration and Italy, consistent with Chapter III which makes a study of sub-Saharan labor outcomes in an Italian region.

1.1. Migrants' features

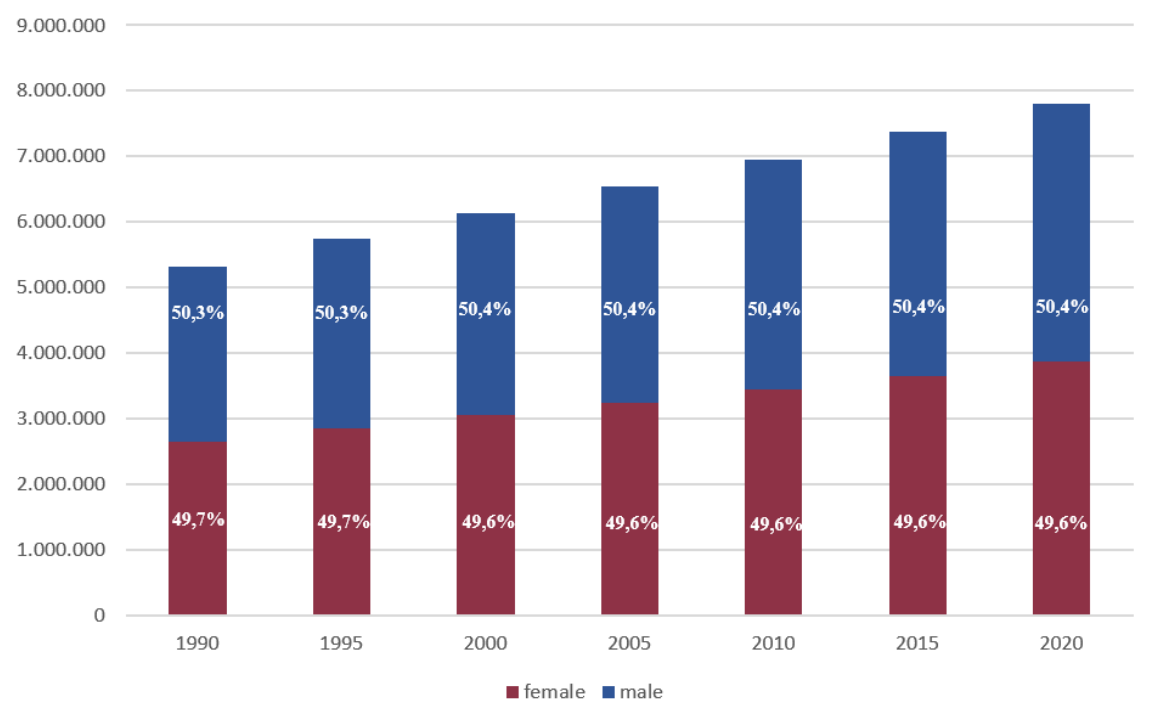
Apart from the general definitions of migration and migrant, there are several specific definitions of key terms related to migration, including in legal, administrative, academic, and statistical contexts. Definitions are widely accepted and have been developed in different contexts, such as those established in the UN DESA's 1998 *Recommendations on Statistics of International Migration* (UN DESA, 1998). A conceptual framework was approved by the United Nations Statistical Commission at its 52nd session in March 2021, initiating the revision of the recommendations on migration to make them more representative of the different aspects that characterize the phenomenon. Geographical, legal, political, methodological, temporal, and other factors necessarily influence these definitions. For example, there are numerous ways in which migration events can be defined, including in relation to place of birth, citizenship, place of residence, etc. This is

important when it comes to quantifying and analyzing the effects of migration and the characters of migrants.

The current United Nations recommendations on international migration statistics define an "international migrant" as any person who has changed their country of usual residence, distinguishing between "short-term migrants" (those who have changed their country of usual residence for less than one year, but for at least three months) and "long-term migrants" (those who have done so for at least one year). Nevertheless, countries use different criteria to identify migrants (for example, by applying different rules on the length of residence). Differences in concepts and definitions, as well as data collection methodologies across countries, hinder the full comparability of national statistics on international migrants.

In 2020, most of migrants (78%) were between 15 and 64 years old. Migrants over 64 years of age stood at around 12.2%, while the percentage of migrants under 19 years of age dropped from around 19% in 1990 to 14.6% 20 years later. With regard to gender, in 2020 the number of male migrants exceeded the number of female migrants overall, resulting in a growth of this gap over the past 20 years: while in 2000 the male-to-female ratio was 50.6 versus 49.4 (88 million male migrants and 86 million female migrants), in 2020 it grew to 51.9 versus 48.0 % (146 million male migrants and 135 million female migrants) (IOM, 2022).

Figure 1 - International migrants, by sex, 1990-2020 (thousands)



Source: IOM, 2022

1.1.1. Refugees and asylum seekers

According to the 1951 Convention Relating to the Status of Refugee (and its 1967 Protocol), a refugee is a person who is outside his or her country of nationality or habitual residence; has a well-founded fear of being persecuted because of his or her race, religion, nationality, membership of a particular social group or political opinion; and is unable or unwilling to avail him or herself of the protection of that country, or to return there, for fear of persecution (see Art. 1A). Therefore, a key difference between refugees and common migrants is that while refugees are forced to flee because of a threat of persecution and because they lack the protection of their own country, migrants may leave their country for many reasons that are not related to persecution – such as employment, family reunification or study – and continue to enjoy the protection of their own government, even when abroad.

In 2020, the total number of refugees worldwide was 26.4 million (around 9.7% of total migrants), of which 20.7 million were under the mandate of UNHCR and 5.7 million registered by the United Nations Relief and Works Agency for Palestine Refugees

(UNRWA).[1] While this is the highest number of refugees ever recorded, the annual rate of growth has slowed since 2012.

In the same year 2020, the number of asylum seekers awaiting refugee status determination stood at 4.1 million, with the overall number of first instance asylum applications at 1.1 million – a 45% drop from 2 million the previous year. Such a large drop in one year was recorded in 2020 for the first time since 2000 and was likely a direct result of COVID-19 mobility restrictions. Around 38% of refugees are aged 0-18 (8 million of the 20.7 million refugees under UNHCR mandate) and 21,000 individual asylum applications for unaccompanied and separated children (UASC) were filed, down from 25,000 in 2019.

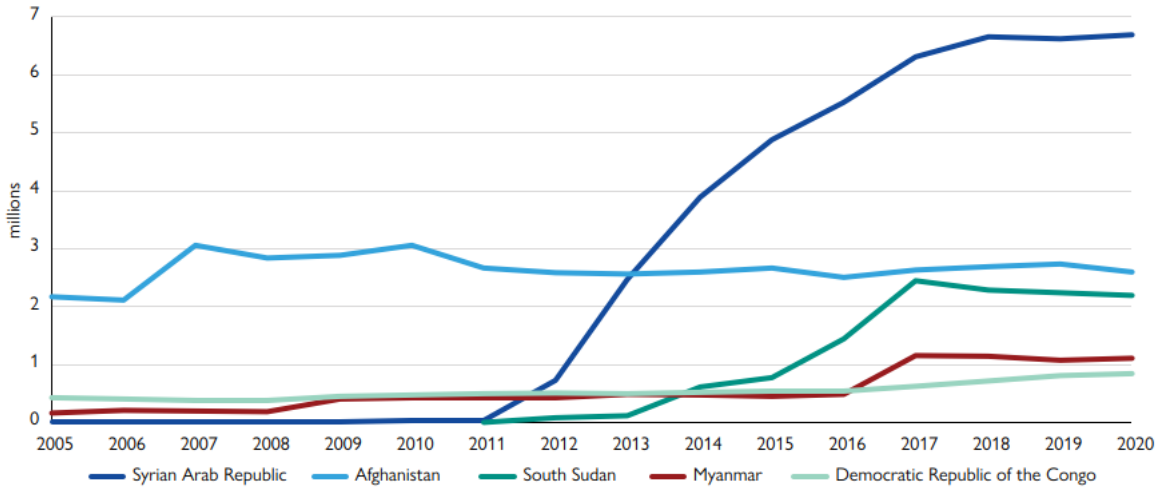
Refugee recipient countries include first and foremost the United States with around 250,800 requests, following 301,000 in 2019 (-14%), followed by Germany with 102,600 new requests (142,500 in 2019), the lowest number recorded in almost 10 years. The top 10 countries of origin include Syrian Arab Republic, Afghanistan, South Sudan, Myanmar, Democratic Republic of Congo, Somalia, Sudan, Central African Republic, Eritrea and Burundi. These ten countries account for over 80% of the total refugee population, some for at least 7 years. More than half of the world's refugee population comes from the Syrian Arab Republic, Afghanistan, South Sudan, Myanmar and the Democratic Republic of Congo combined. The large number of outbound refugees in these countries is mainly due to the conflicts and civil wars that have prevented the population from leading a safe life for years.

In the Syrian Arab Republic, the civil war that has been going on for more than 10 years has brought the number of refugees to about 6.7 million in 2020 with about 100,000 people more than in 2019, making the country the world's first country of origin of refugees for the seventh consecutive year. In this country, the civil war has had a fundamental impact on the growth of the number of refugees, which in 2010 amounted to less than 30,000 refugees and asylum seekers and, in contrast, was the third largest country in the world in terms of the number of incoming refugees, with more than 1 million refugees coming mainly from Iraq. Afghanistan is the second largest country by origin of flows, and a major source of refugees for over 30 years, with 2.6 million refugees in 2020, down from 2.7 million in 2019. Since 2016, South Sudan has been the third

1 The content in this subsection is based on and drawn from UNHCR, 2021a.

largest country of origin of refugees, with 2.2 million at the end of 2020. Figure 2 shows trends in the number of refugees for the five main countries of origin from 2005 to 2020.

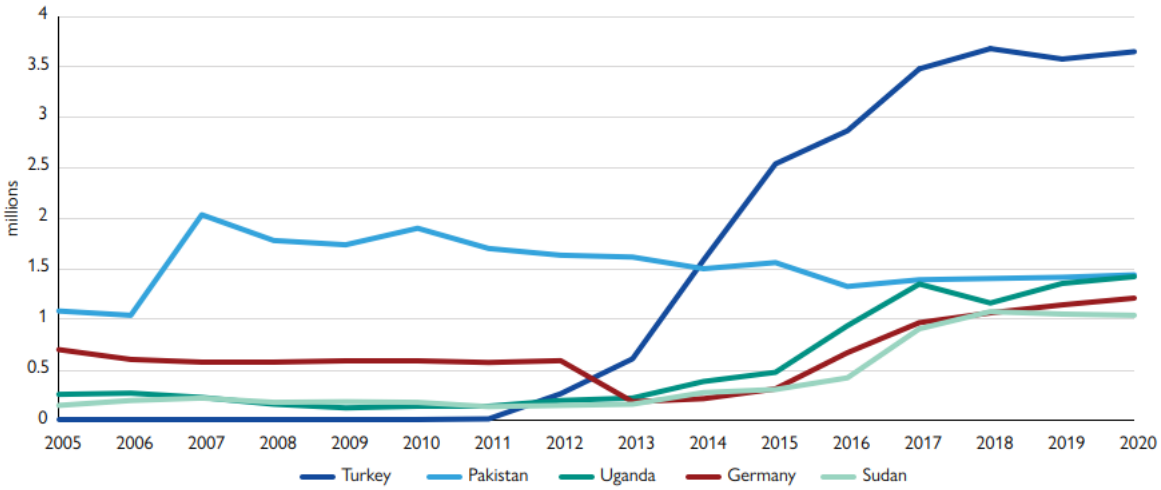
Figure 2 - Number of refugees by top five countries of origin, 2005–2020 (millions)



Source: UNHCR, 2021; IOM, 2022

In recent years, more than half of all refugees resided in 10 countries. The top country for number of refugees hosted was Turkey in 2020 (for the fifth consecutive year), with over 3.6 million refugees, mostly Syrians. Lebanon is also among the top 10 countries in the world receiving refugees due to the Syrian conflict itself. Afghan refugees were mainly hosted by Pakistan and the Islamic Republic of Iran, two of the top 10 refugee receiving countries. Other refugees were mainly concentrated in Uganda, Germany, Sudan, Bangladesh, and Ethiopia. Because they are easier to reach physically, countries close to those from which the refugee flows originate host most of them, amounting to about 73% of the total. According to UNHCR, the least developed countries - such as Bangladesh, Chad, Democratic Republic of Congo, Ethiopia, Rwanda, South Sudan, Sudan, United Republic of Tanzania, Uganda and Yemen - hosted 27% of the global total (6.7 million refugees).

Figure 3 - Number of refugees by top five host countries as of 2020 (millions)



Source: UNHCR, 2021; IOM, 2022

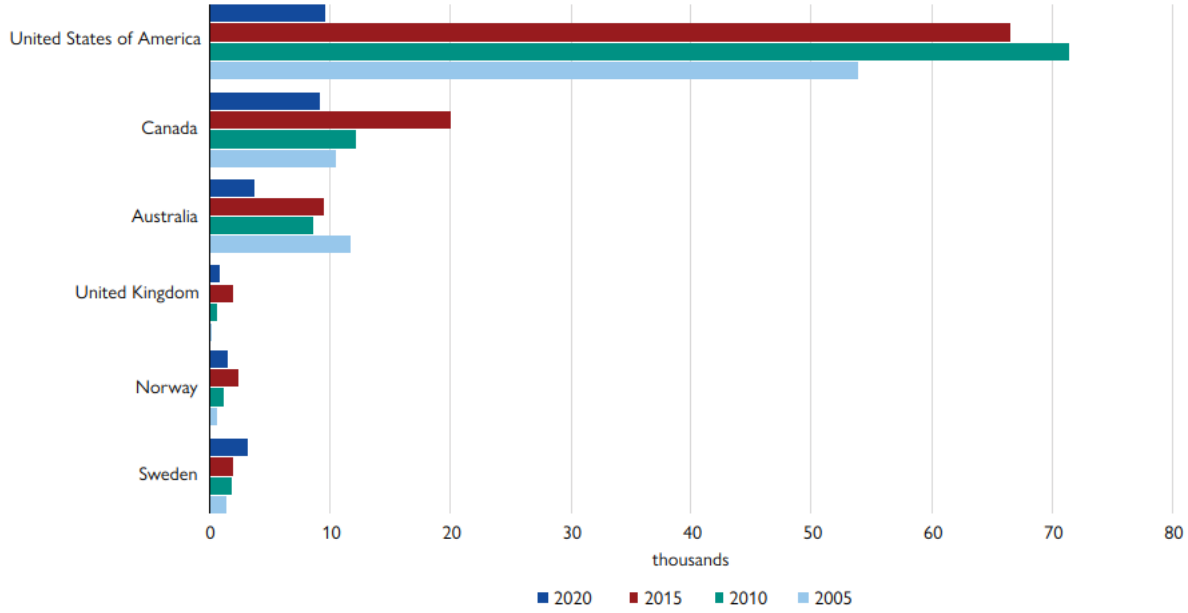
Regarding return flows, only 250,000 refugees returned to their countries of origin in 2020, compared to 317,000 in 2019 (-21%). South Sudan surpassed the Syrian Arab Republic in the number of refugees who returned in 2020: around 122,000 refugees (almost 50%) in fact returned to South Sudan, mainly from Uganda (74,000).

An important issue concerning refugees is their integration in the host country and how to measure this integration. According to UNHCR, in 2020, there was at least one naturalized refugee in 28 countries (up from 25 in 2019), but with a total of almost 34,000 naturalized refugees for the year, down significantly from almost 55,000 naturalized refugees in 2019. However, looking at the 23,000 naturalized refugees in 2016 it seems clear that the current number still represents an increase from five years earlier. Most of the naturalizations in 2020 (85%) took place in Europe, mainly in the Netherlands (around 25,700) and France (around 2,500). In Canada, the number amounted to 5,000 in the same year.

When host countries cannot afford the protection of refugees, a resettlement may be carried out. Resettlement is the transfer of refugees from an asylum country to another State, that has agreed to admit them and ultimately grant them permanent residence. While over 107,700 (0.5% of the total) refugees were eligible for resettlement in 2019, in 2020 this number dropped dramatically to 34,400 (less than 0.2%). Again, such a drop is partially due to restrictions on international mobility adopted to deal with the pandemic. The main resettlement countries were the United States with 9,600 refugees (27,500 in 2019), Canada with about 9,200 refugees (30,100 in 2019), the European Union as a

whole (11,600 refugees in 2020). In the specific case of the United States, the decrease can also be partially explained by legislative changes on refugee admission thresholds and stricter screening of refugees from 'high-risk' countries. Figure 4 provides an overview of resettlement statistics for key countries from 2005 to 2020.

Figure 4 - Number of refugees resettled by major resettlement countries in 2005–2020



Source: UNHCR, 2021; IOM, 2022

Data on resettlement show that the number of people resettled is far lower than the need as the size of refugees in need of resettlement has almost doubled in the last 10 years. According to UNHCR, while in 2011 there were approximately 805,000 refugees in need of resettlement, in 2021 the number has almost doubled (1.4 million people). Furthermore, the number of refugees resettled has experienced an irregular trend, in fact, in 2005 almost 81,000 refugees were resettled compared to approximately 34,000 in 2020, while, in 2019 the number resettled was almost 108,000 (see Table 1).

Table 1 - Number of refugees needing resettlement and number of refugees

Year	Resettlement needs	Resettlement arrivals	% of resettlement arrivals out of needs
2011	806.535	79.727	10%
2012	781.299	88.918	11%
2013	859.305	98.359	11%
2014	690.015	105.148	15%
2015	958.429	106.997	11%
2016	1.153.296	172.797	15%
2017	1.190.519	102.709	9%
2018	1.195.349	92.348	8%
2019	1.428.011	107.729	8%
2020	1.440.408	24.383	2%

Source: UNHCR, 2021; IOM, 2022

1.1.2. Internally displaced persons

Internally displaced people (IDPs) have not crossed a border to find safety. Unlike refugees, they stay within their own country and remain under the protection of their government, even if that government is the reason for their displacement[2]. They often move to areas where it is difficult to deliver humanitarian assistance and as a result, these people are among the most vulnerable in the world (UNHCR). The Internal Displacement Monitoring Centre (IDMC) collects data on displacement over a period of time and on the stock of IDPs at a specific point in time and classifies them according to the cause of displacement (disasters and conflicts). Estimates for 2020 suggest that 48 million people are internally displaced in 59 countries, up from 45.9 million in 2019 – an estimate that is likely to be lower than the actual size, given the difficulty of collecting information following the spread of COVID-19. This number also represents the highest ever recorded since 1998, although in some cases data collection does not consider changes in the status of displaced persons who have not found a durable solution yet but have actually returned home. For this reason, some organizations such as IDMC follow the Inter-Agency Standing Committee's Durable Solutions for Internally Displaced Persons, which establishes eight criteria that constitute a durable solution in determining when people should no longer be considered internally displaced. The criteria include safety and security; adequate standard of living; access to livelihoods; restoration of housing, land,

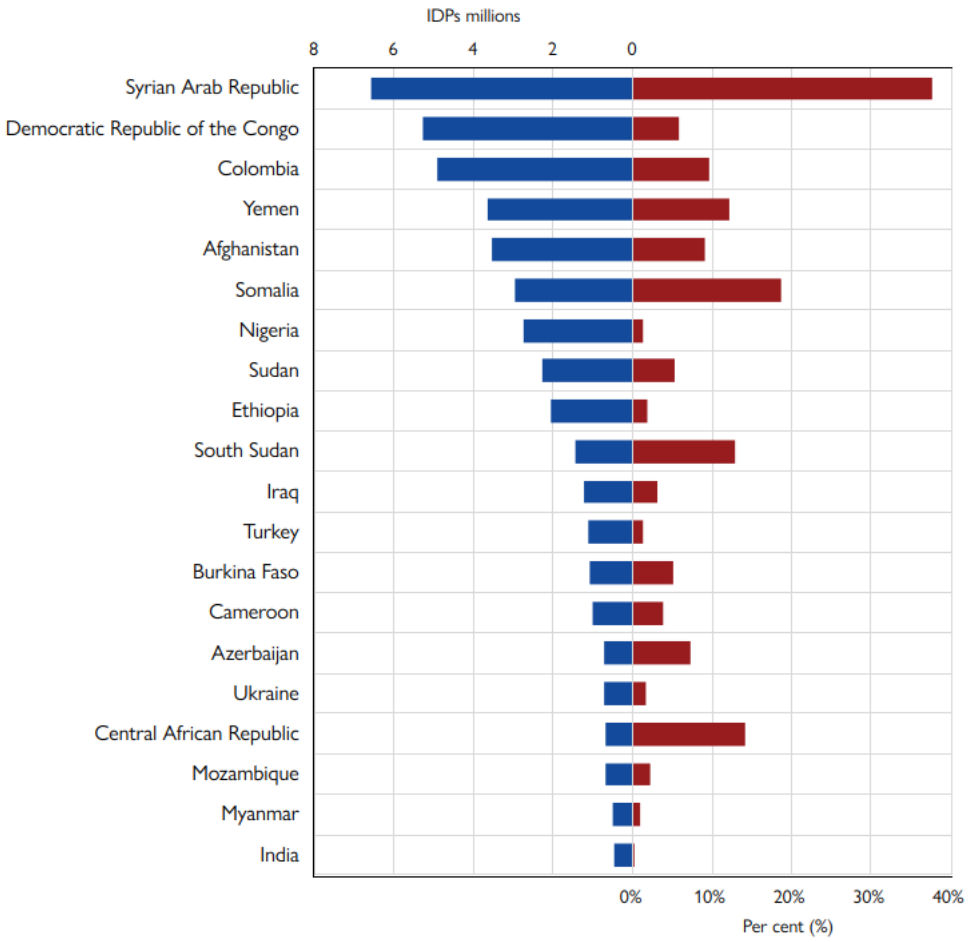
[2] The content in this subsection is based on and drawn from UNHCR, 2021a and IDMC, 2019.

and property; access to documentation; family reunification; participation in public affairs; and access to effective remedies and justice.[3]

Consistent with section 1.1.2, the number of displaced persons has also increased dramatically since 2010 and has almost doubled since 2000 due to existing and new conflicts. Most of the 20 countries with the highest number of displaced persons are in the Middle East or sub-Saharan Africa (see Figure 5). Again, the top country in the world for the number of displaced persons is the Syrian Arab Republic (6.6 million) where more than 35% of the population is displaced, followed by the Democratic Republic of Congo (5.3 million), Colombia (4.9 million), Yemen (3.6 million) and Afghanistan (3.5 million). Somalia has the second highest proportion of displaced persons in the population (19%), followed by the Central African Republic, South Sudan and Yemen (with over 12%). More than 74% of total IDPs (35 million out of 48 million) lived in only 10 countries in 2020.[4]

3 See, for example, Brookings Institution and University of Bern, 2010; IDMC, 2019.
4 The 10 countries comprise the Syrian Arab Republic, the Democratic Republic of the Congo, Colombia, Yemen, Afghanistan, Somalia, Nigeria, the Sudan, Ethiopia and South Sudan.

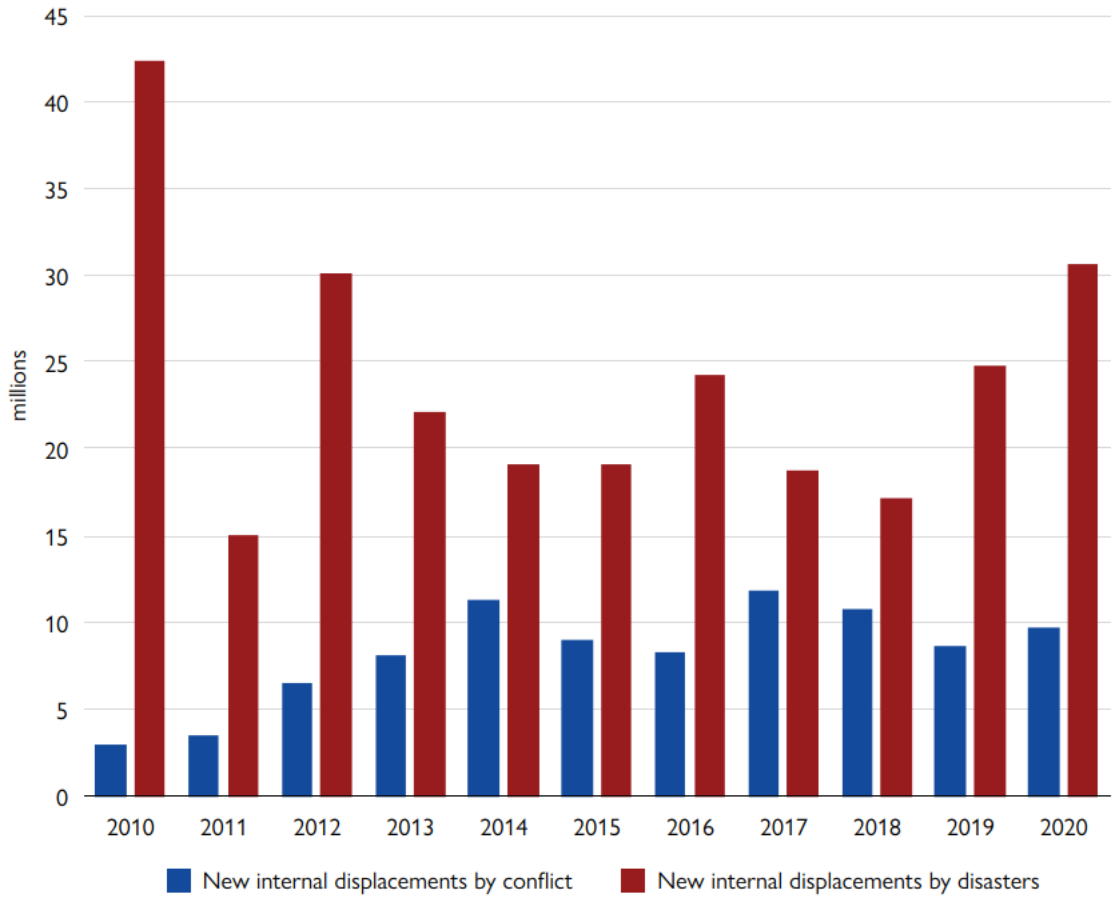
Figure 5 - Top 20 countries with the largest populations of internally displaced persons



Source: IDMC, 2021; IOM, 2022

Each year, more people are newly displaced by disasters than by conflict and violence, and many more countries are affected by displacement due to disasters. In 2020, the total number of newly displaced people was from 144 countries and territories due to disasters and 42 countries and territories due to conflict and violence (see Figure 6). In turn, most of the new displacements due to disasters are due to climate-related disasters (30 million) including storms (14.6 million) and floods (14.1 million).

Figure 6 - New internal displacements due to conflict and disasters, 2010–2020 (millions)



Source: IDMC, 2021; IOM, 2022

1.2. Global trends on migrations

The current global estimate is that there were approximately 281 million international migrants worldwide in 2020, 3.6 % of the global population, still a very small minority of the world's population – thus, living within one's country of birth remains the norm[5]. The estimated number of international migrants has increased over the past 50 years: as shown in Table 2, in 2020 the number of people living in a country other than their country of birth was about 128 million more than in 1990 (about 153 million), and more than three times higher than in 1970 (84 million). The proportion of international migrants as a share of the total global population has also increased. Although the impact of COVID-19 on the stock of migrants is still difficult to assess to date, the reduction is estimated to be around two million (281 million instead of 283 million) (IOM 2022).

[5] The content in this subsection is based on and drawn from UN DESA, 2021a and OIM, 2022.

Table 2 - International migrants

Year	Number of international migrants	Migrants as a % of the world's population
1970	84.460.125	2.3
1975	90.368.010	2.2
1980	101.983.149	2.3
1985	113.206.691	2.3
1990	152.986.157	2.9
1995	161.289.976	2.8
2000	173.230.585	2.8
2005	191.446.828	2.9
2010	220.983.187	3.2
2015	247.958.644	3.4
2020	280.598.105	3.6

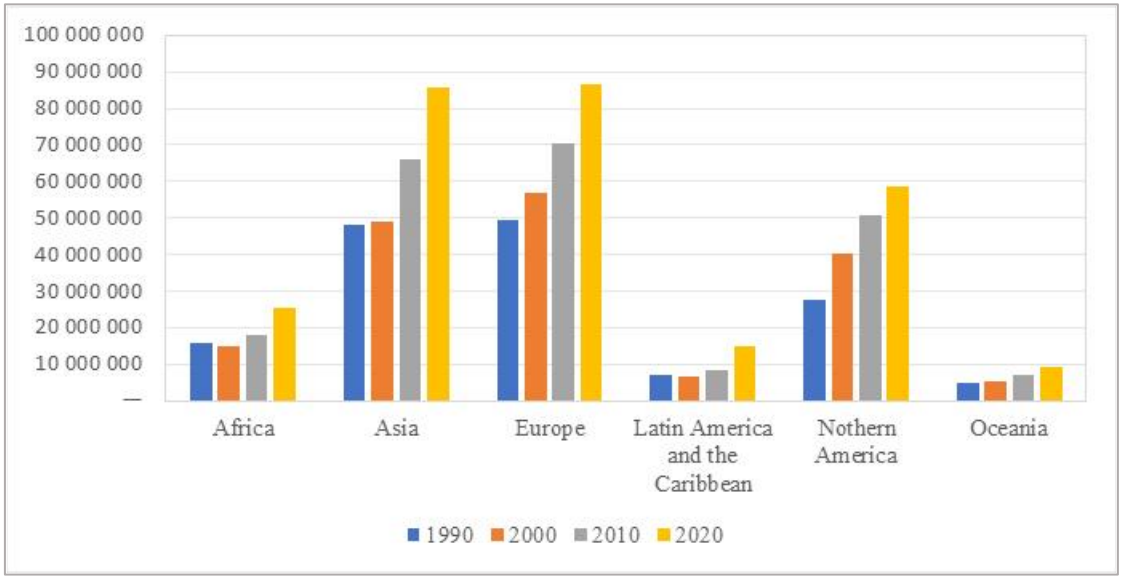
Source: UN DESA, 2008; UN DESA, 2021a.[6]

Europe and Asia are the largest destinations for international migrants, with about 30.9% of the international migrant population (87 million migrants), and 30.5%, (86 million migrants) respectively, followed by North America with 20.9% (59 million) and Africa with 9% (25 million migrants) (UN DESA 2021a). The region with the highest growth rate of the migrant population is Latin America and the Caribbean, where the stock has increased from 7 million to 15 million in the last 15 years (5.3% of the international migrant population). The Oceanic region accounts for 3.3% with about 9 million

[6] *Note: The number of entities (such as States, territories and administrative regions) for which data were made available in the UN DESA International Migrant Stock 2020 was 232. In 1970, the number of entities was 135.*

international migrants. The growth of international migrants living in each region between 2005 and 2020 is shown in Figure 7.

Figure 7 - International migrants, by major region of residence, 1990–2020 (millions)



Source: UN DESA, 2008; UN DESA, 2021a.

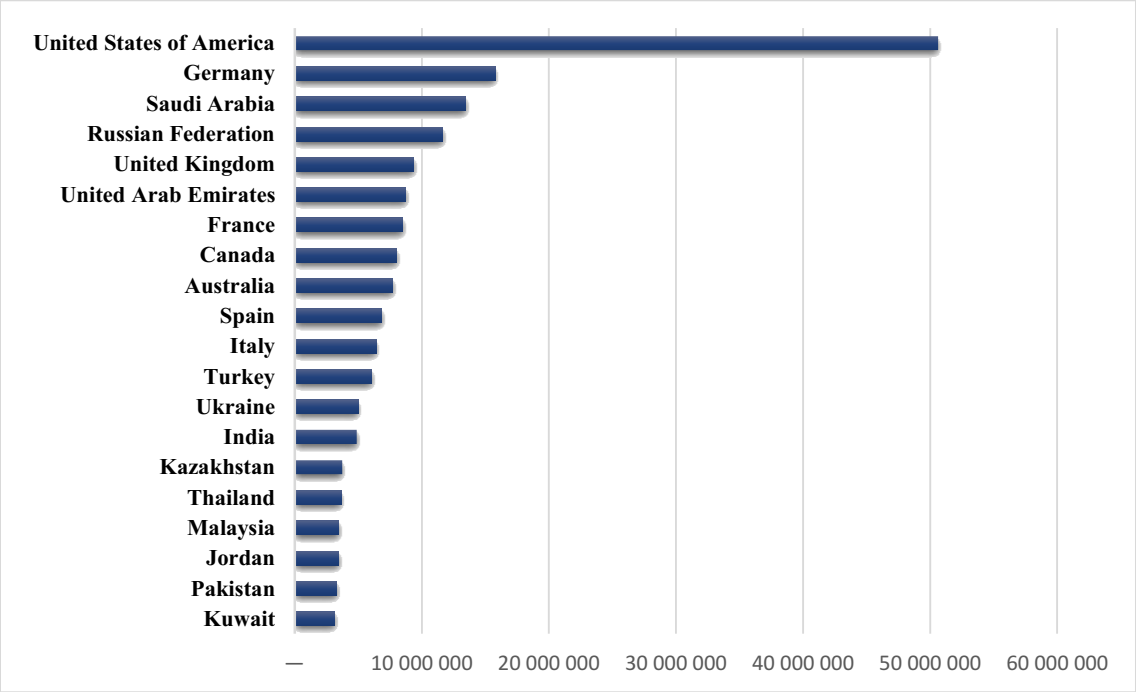
Table 3 - Migrants as proportion of resident population, by region

Region	1990	2000	2010	2020
Africa	2,49%	1,86%	1,71%	1,89%
Asia	1,49%	1,31%	1,57%	1,84%
Europe	6,88%	7,84%	9,59%	11,60%
Latin America and the Caribbean	1,61%	1,25%	1,41%	2,26%
Nothern America	9,87%	12,92%	14,85%	15,92%
Oceania	17,33%	17,06%	19,33%	21,98%

Source: UN DESA, 2008; UN DESA, 2021a.

With regard to individual destination countries, the country with the largest share of international migrants is the United States of America, with over 51 million international migrants, followed by Germany (16 million), Saudi Arabia (13 million), the Russian Federation (12 million) and the United Kingdom (9 million).

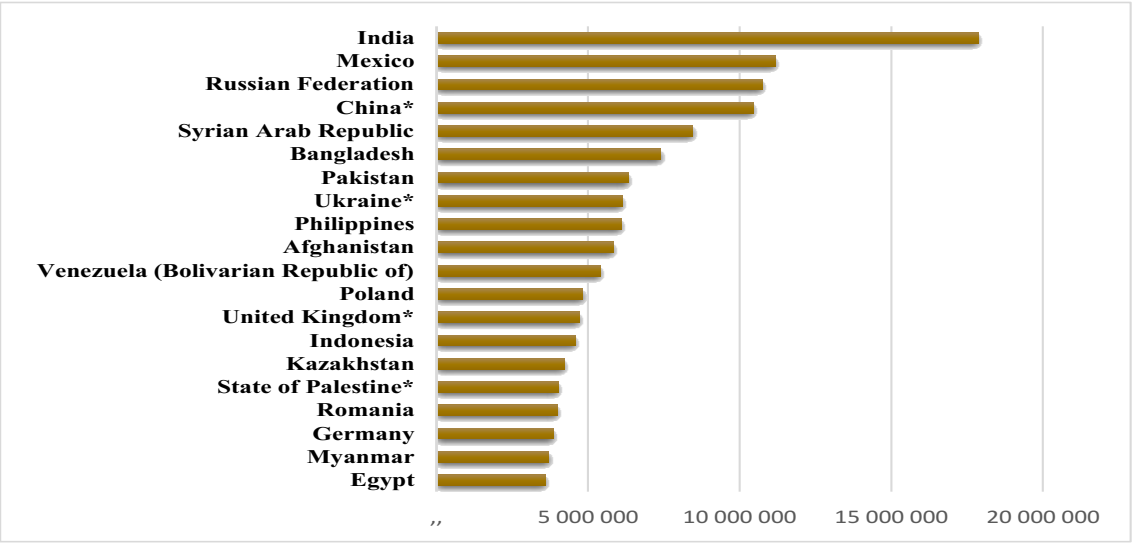
Figure 8 - Top 20 destinations of international migrants in 2020 (millions)



Source: UN DESA, 2008; UN DESA, 2021a.

Among the countries of origin of the flows, India has the largest emigrant population in the world (18 million people living abroad), followed by Mexico (11 million), the Russian Federation (10.8 million), China (about 10.8 million and 10 million respectively) and the Syrian Arab Republic (8 million people, mainly refugees).

Figure 9 - Top 20 origins of international migrants in 2020 (millions)

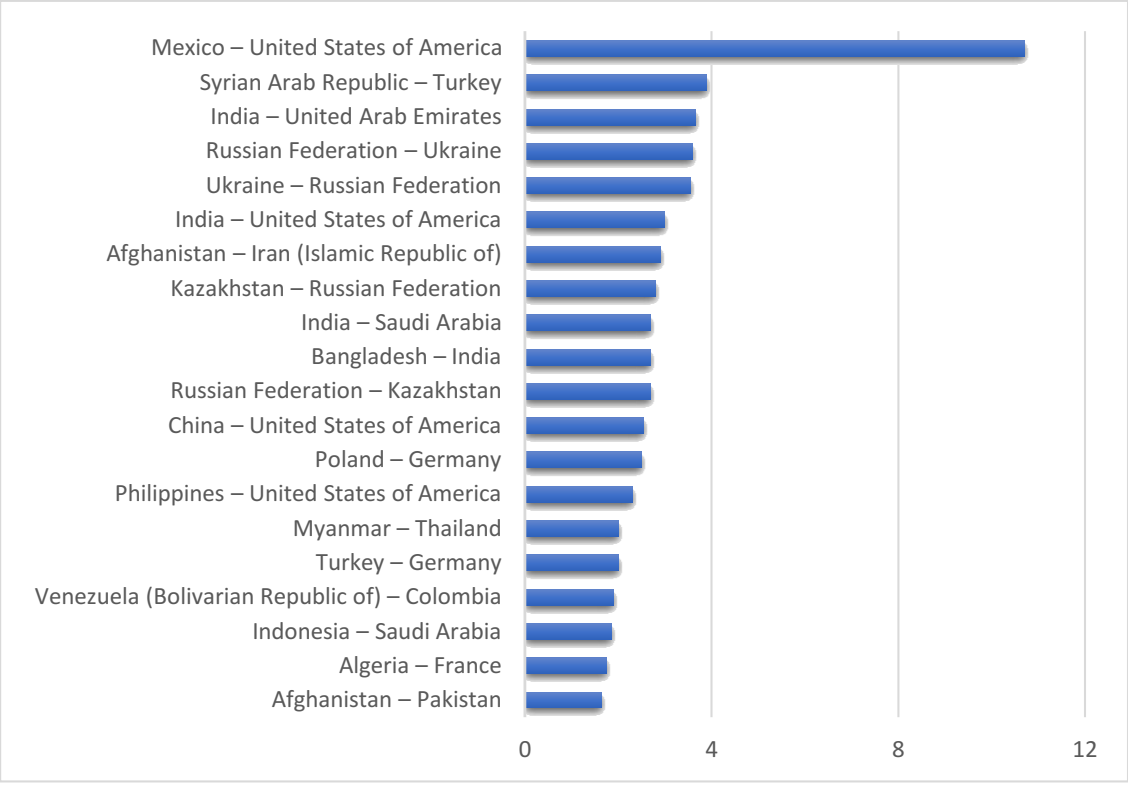


Source: UN DESA, 2008; UN DESA, 2021a.

1.2.1. Migration corridors

A significant aspect of the migratory phenomenon relates to migration flows that connect two countries, thus determining "migratory corridors". The size of these flows is calculated on the basis of how many people born in Country *A* are resident in Country *B*. If one considers the changes that these corridors have undergone over time, it is possible to have an estimate of how the flows have evolved and which countries they have involved. In 2020, the corridor from Mexico to the United States is the largest in the world with almost 11 million people, followed by the one from the Syrian Arab Republic to Turkey (which mainly includes refugees caused by the civil war in the Syrian Arab Republic) and the one from India to the United Arab Emirates (over 3 million, mainly for working reasons). Also, in 2020, the bilateral corridor between the Russian Federation and Ukraine occupied the fourth and fifth largest corridors in the world, with about 3 million people born in the Russian Federation living in Ukraine just under 3 million Ukrainians residing in the Russian Federation.

Figure 10 - Top 20 international migration country-to-country corridors, 2020



Source: UN DESA, 2008; UN DESA, 2021a.

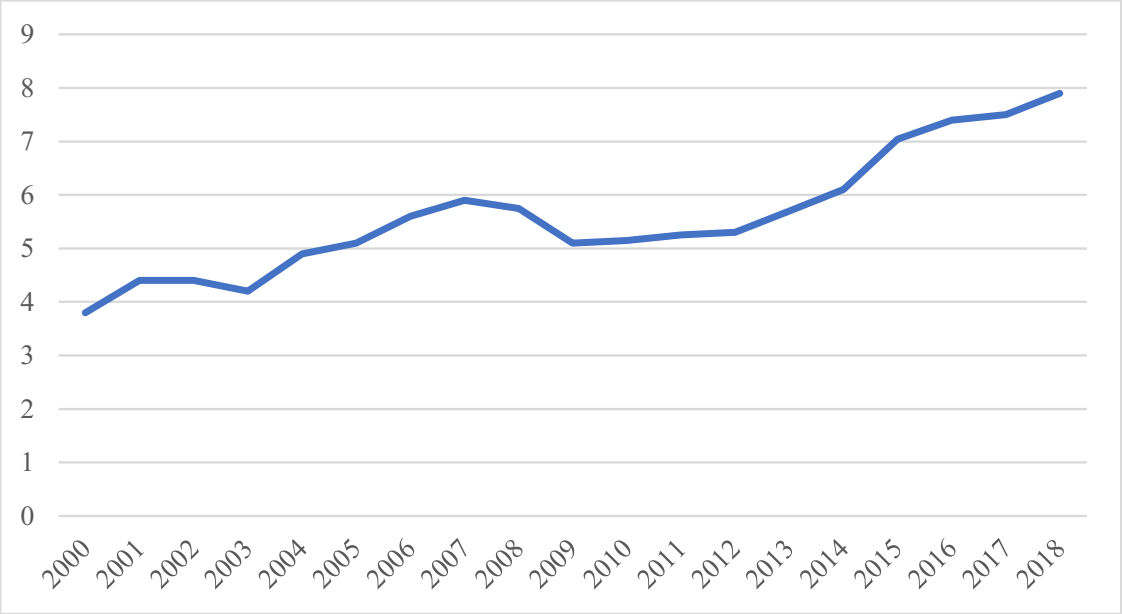
This data on migration corridors is also useful because focusing on the stock of migrants actually staying in a country provides insight into global trends even in the absence of flow data. In fact, while data on stocks of migrants are widely available, data on global migratory movements, and thus on actual flows, are more limited. The UN DESA database on migratory flows, for example, includes only 45 countries. The difficulty in finding data on flows is due to several reasons. First, data collection generally focuses more on recording inflows rather than departures, as many countries only count entries and not departures (unlike, for example, the United States and Australia, which usually also count departures) (Koser, 2010; McAuliffe and Koser, 2017). Second, migration data in some countries are calculated from administrative changes in immigration status (e.g., issuance/renewal/withdrawal of a residence permit), which are then used as proxies for migration flows. Third, it is not always straightforward to identify a migrant when it comes to trips that might be for temporary employment or tourism (Skeldon, 2018). Fourth, tracking flows also requires resources, infrastructure, and ICT/knowledge systems that are not available to all countries, especially in the case of developing countries. Finally, the physical geographies of some countries limit the ability of officials to collect flow data, for example in the case of coastal or particularly difficult to monitor borders (Gallagher and McAuliffe, 2016).

UN DESA's International Migration Flows dataset and the OECD's International Migration Database represent two main datasets on international migration flows to date. Since 2005, UN DESA has collected data on international migrant outflows and inflows with respect to a number of selected countries, based on available statistics at the national level (the migratory flows in 2015 includes data from 45 countries, up from 29 countries in 2008 and 15 countries in 2005).[7] The OECD has been collecting data on international migratory flows since 2000. In 2018, there was a 10% increase in permanent migration flows over the previous year. Among the countries considered, it appears that the United States were only one of the main destination countries, with about 1.1 million new entries in 2018, (a decrease of 2.7% from the previous year), while Chile showed a growth of 64 %, as well as the set of European countries of the OECD, in which total migration increased by about 136. 000 in 2018 (3.2% more than in 2017). Among European countries, the United Kingdom and Italy showed declines of 6.5% and 5.2% in permanent

7 For UN DESA migration flow data, as well as for the specific countries included, please see UN DESA, 2015.

flows, while Spain and Portugal showed growth (+23%, or an increase of about 106,000, and +52%, or an increase of about 32,000, respectively).

Figure 11 - Inflows of foreign nationals into OECD countries, permanent migration, 2000-2018 (millions)



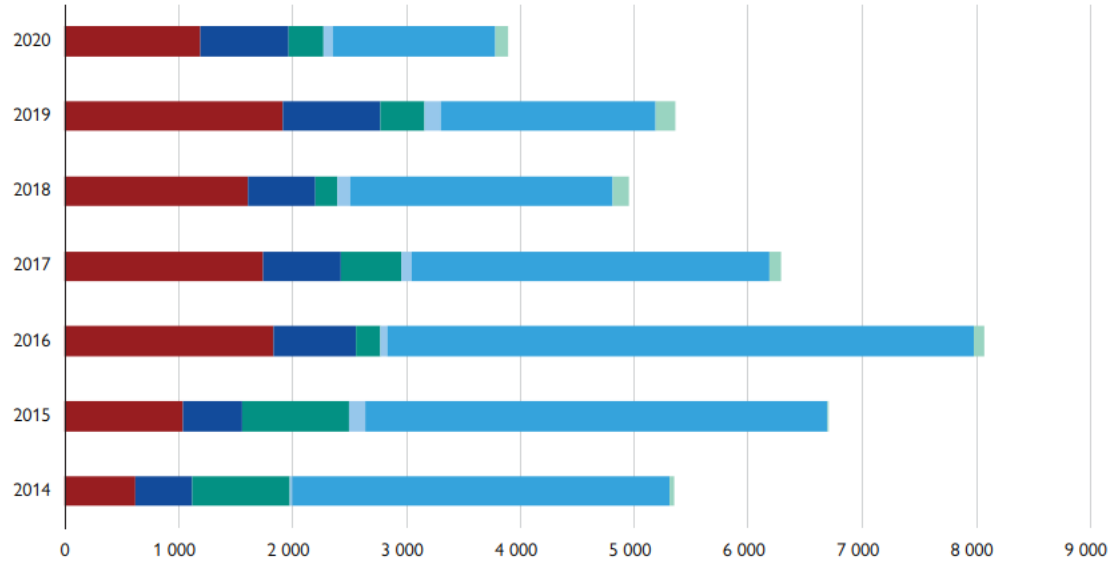
Source: IOM, 2022.

Due to a variety of geographic, political and social reasons, some migration corridors prove to be particularly dangerous, if not fatal, for the migrants who travel through them (McAuliffe et al., 2017). After the tragic events that in October 2013 saw 360 people die at sea near the coast of the Italian island of Lampedusa, IOM began collecting information on migrants who die or go missing on migration routes around the world as part of its Missing Migrants Project.[8] Data is collected from official records of coast guard and medical examiners, reports from journalists, reports from non-governmental organizations and United Nations agencies, and interviews with migrants. During the first 6 years of collecting such data, 2020 recorded the lowest total (about 3,900), compared with nearly 5,400 recorded in 2019 (see Figure 12) likely in part because of mobility restrictions imposed due to the COVID-19 pandemic. The highest number of deaths was recorded between 2014 and 2020 in the Mediterranean (more than 21,200 people). In 2020, more than 1,460 fatalities were recorded in the Mediterranean itself, and the trend that the highest proportion of fatalities was recorded in the "central Mediterranean route" was confirmed. Statistics from the Missing Migrants Project, however, suffer from the

8 See https://missingmigrants.iom.int/

difficulty in finding data faces significant challenges in data collection, primarily due to the fact that these migrants often travel along clandestine routes, by sea or through remote and poorly controlled areas, and remains are not always found. However, the project has the merit of addressing a previously under-researched and neglected issue, highlighting the need to address this tragic ongoing problem, including in the context of implementing the Global Compact for Safe, Orderly, and Regular Migration.

Figure 12 - Migrant deaths by region, 2014 - 2020



Source: IOM, 2022

1.3. Labor migration

In 2019, 3.5 billion people were workers. Of these, 7.5% were in low-income countries, 31.9% in lower-middle-income countries, 42.6% in upper-middle-income countries, and 18.0% in high-income countries[9].

In the same year, there were approximately 169 million migrant workers in the world, accounting for nearly two-thirds (62%) of the total number of international migrants (272 million in 2019) and 68% of working-age migrants (15 - 64 years old) whose total was 245.6 million. Migrant workers were split among high-income countries (about 67% with 113.9 million), middle-income countries (29% with 49 million), and low-income countries (3.6% with 6.1 million). Therefore, the distribution of migrant workers across

[9] The content in this subsection is based on and drawn from ILO, 2021.

income categories of countries is not consistent with the same distribution for non-migrant workers (see Table 4).

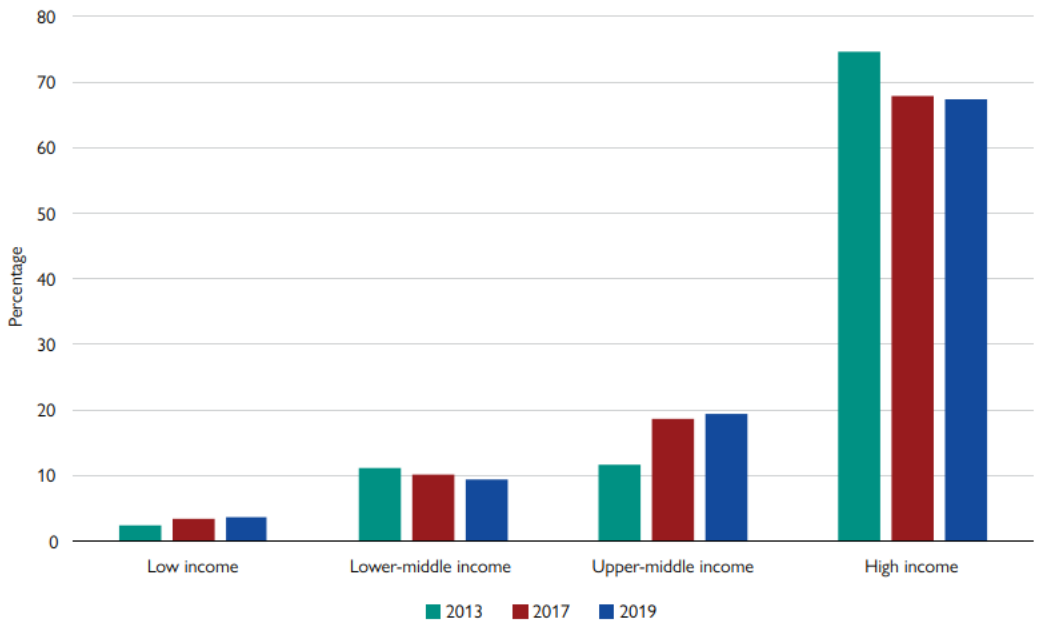
Table 4 - International workers by income level of countries, 2019 (millions)

	Low-income	Lower-middle-income	Upper-middle-income	High-income	Total
Total workers (millions)	261.1	1111.6	1484.3	625.2	3482.2
Distribution of workers (%)	7.5	31.9	42.6	18.0	100
Migrant population aged 15+ (millions)	8.9	25.6	48.6	161.7	244.8
Distribution of migrant population aged 15+ (%)	3.6	10.5	19.9	66.1	100
Migrants as a proportion of population aged 15+ (%)	2.3	1.3	2.1	15.7	4.3
Migrant workers (millions)	6.1	16.0	33.0	113.9	169.0
Distribution of migrant workers (%)	3.6	9.5	19.5	67.4	100
Migrant workers as a proportion of all workers (%)	2.3	1.4	2.2	18.2	4.9

Source: ILO, 2021

From 2013 through at least 2019, there was a 7.3 percentage point decline in migrant workers in high-income countries (from 74.7% to 67.4%), and an almost equal increase in upper-middle-income countries (+7.8 %, from 11.7% to 19.5%), which is likely due to economic growth in middle-income countries and/or changes in labor immigration regulations in high-income countries (see Figure 13).

Figure 13 - Migrant workers by destination country income level, 2013, 2017 and 2019



Source: ILO, 2018; ILO, 2021; OIM, 2022

The share of immigrant workers in the total labor force was particularly influential in high-income countries (18.2%) and less so in low-income countries (2.3%) and upper-middle and lower-middle-income countries (2.2% and 1.4%). Around 102.4 million or nearly 61% of all migrant workers resided in three subregions: North America, the Arab states, and Northern, Southern, and Western Europe. In the Arab States region, migrant workers make up 41.4% of the entire working population, often dominating the labor market in key sectors.[10]

Among migrant workers, there were 70.1 million females (41.5%) and 98.9 million males (58.5%) in 2019. These proportions are consistent with the respective shares of international working-age migrants, where there are an estimated 117.6 million women (47.9%) and 128 million men (52.1%) (see Table 5).

Table 5 - International migrant workers, by sex and income level of destination country, 2019

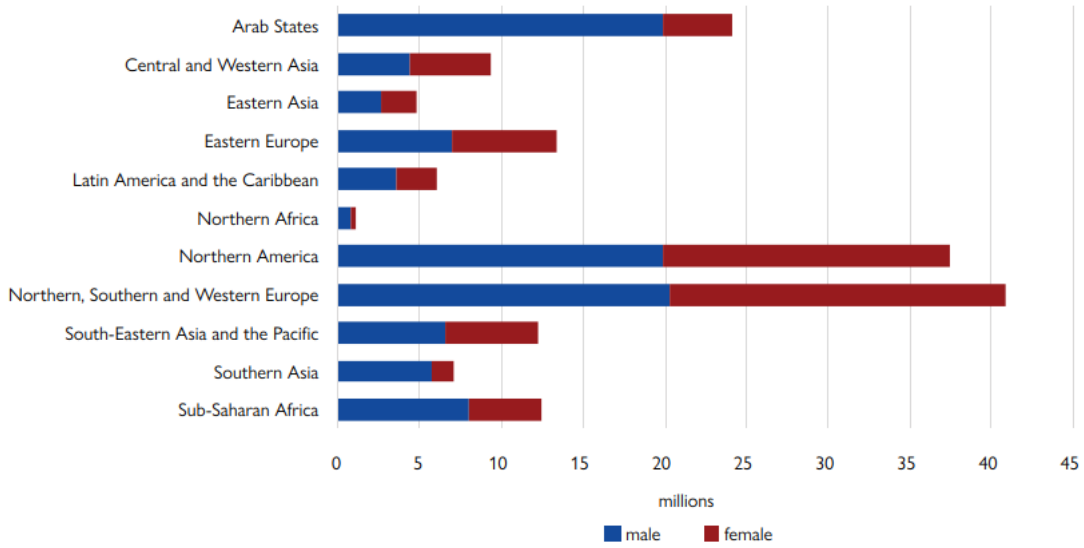
	Migrant workers (millions)			Proportion of all migrant workers (%)		
	M	F	Total	M	F	Total
Low-income	3.7	2.4	6.1	2.2	1.4	3.6
Lower-middle-income	10.5	5.6	16.0	6.2	3.3	9.5
Upper-middle-income	19.5	13.5	33.0	11.5	8.0	19.5
High-income	65.3	48.5	113.9	38.6	28.7	67.4
Global Total	**98.9**	**70.1**	**169.0**	**58.5**	**41.5**	**100.0**

Source: ILO, 2021; OIM, 2022

In 2013, the share of female migrant workers constituted 44.3% and that of men 55.7%, thus showing a greater gender bias. The distribution of migrants across countries is characterized by gender specificities, and the gap between men and women is greater especially in low- and lower-middle-income countries. This gap is especially pronounced in two regions: South Asia (5.7 million men vs. 1.4 million women) and the Arab states (19.9 million men vs. 4.2 million women) (see Figure 14).

10 The ILO category of "Arab States" includes the following countries and territories: Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen and the Palestinian Territories.

Figure 14 - Geographic distribution of migrant workers by sex (millions), 2019



Source: ILO, 2021; OIM, 2022

With specific regard to migrant workers' distribution across labor market, there is a higher concentration in the service sector (about 66.2 %) followed by industry (26.7 %) and agriculture (7.1 %). However, there are profound differences in the distribution by category of economic activity between men and women. About 79.9 % of female migrants worked in services, 14.2 % in industry and 5.9 % in agriculture. For men, on the other hand, the distribution is relatively more balanced, with 35.6 % working in industry and 56.4 % in services. The remaining male migrant workers (7.9 %) worked in agriculture.

A higher representation of female migrant workers in services can, in part, be explained by a growing demand for labor in the care economy, including health and domestic work (ILO 2015 and 2018c). These subsectors, which predominantly involve a female labor force, tend to be outsourced to migrant workers.

1.3.1. International remittances

Migrants make cash or in-kind transfers to households or communities in their countries of origin known as remittances. Data on remittances are collected by the World Bank[11]. However, this collection is limited to registered flows belonging to formal channels. The real dimension of remittances is therefore likely to be larger than the data show, as many transfers take place through informal channels or are otherwise

11 The content of much of this subsection is based on and drawn from the World Bank's data in relation to migration and remittances (World Bank, n.d.).

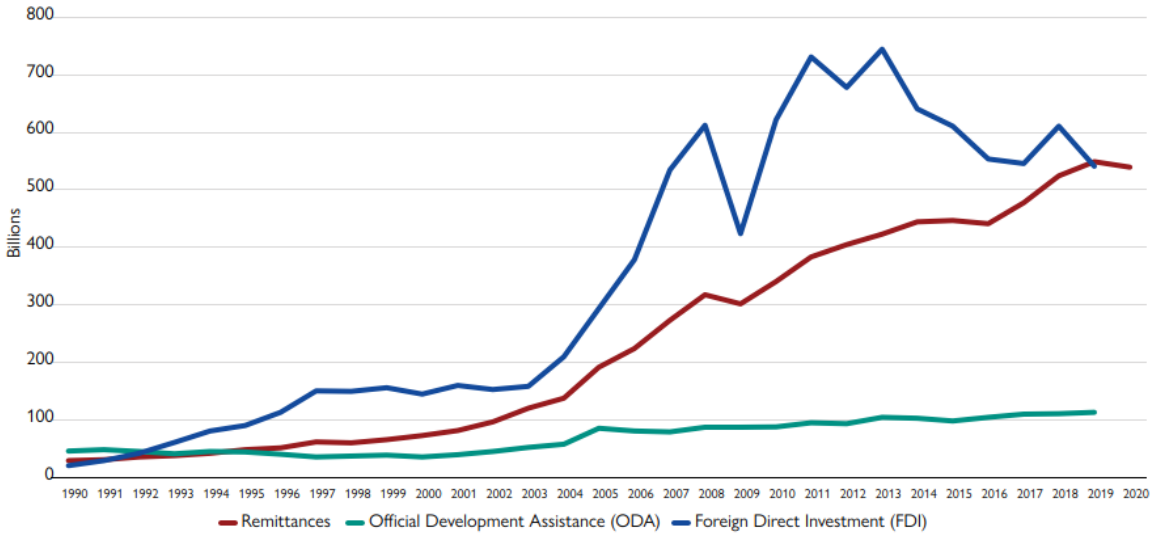
unrecorded. The problem of finding realistic data on remittances emerged even more during the pandemic, when the value of remittances in 2020 was estimated to be much more positive than originally forecast: the drop was only 2.4% compared to a forecast of 20% (April 2020)[12], with a reduction of USD 17 billion between 2019 (USD 719 billion) and 2020 (USD 702 billion). A partial explanation for the limited decline in the value of remittances appears to be the increased use of formal channels in response to restrictions on mobility adopted by various countries.[13] This shift has been encouraged by the increased digitization of financial transfers and the fact that mobile money platforms have made remittance transfers cheaper and faster than traditional cash and bank transfers. The use of mobile money has made remittances more traceable, this method being more secure than informal channels. However, the costs of sending remittances remain high, especially in sub-Saharan Africa, despite global efforts to reduce them. As of March 2021, the average remittance cost amounted to 6.38% of the amount sent, despite the UN SDG target to reduce it to less than 3%.

Despite the slight dip in remittances globally in 2020, the long-term trend is for remittances to increase, from USD 128 billion in 2000 to USD 702 billion in 2020. In the three years prior to the pandemic, global inflows increased by 7.2% in 2017 (from USD 597 billion in 2016 to USD 640 billion in 2017), 8.4% in 2018 (USD 694 billion) and 3.6% in 2019 (USD 719 billion).

Looking at low- and middle-income countries (which account for most total global remittance inflows) remittances grew steadily between 2016 and 2019 by a total of USD 107 billion, from USD 441 billion in 2016, to USD 478 billion in 2017, to USD 524 billion in 2018 to USD 448 billion in 2019. The decline experienced by remittance inflows to these countries in 2020 is 8 billion (from 548 billion in 2019 to 540 billion in 2020) (see Figure 15).

12 Ratha et al., 2020a.
13 IMF, 2020; IOM, 2020g; IOM, 2020h; IOM, 2020i; IOM, 2021b.

Figure 15 - International remittances flows to low- and middle-income countries (1990 - 2020)



Source: IOM, 2022

In 2020, the country receiving the most remittances was India (more than USD 80 billion), followed by China, Mexico, the Philippines and Egypt (see Table 6). The table shows that France and Germany are also present in the top ten of remittance-receiving countries, and this is partly due to the salaries of cross-border workers residing in France and Germany and working in Switzerland, rather than transfers from Swiss residents to their families.[14]

Table 6 - Top 10 countries receiving international remittances (2005–2020)

Top countries receiving remittances							
2005		2010		2015		2020	
China	23.63	India	53.48	India	68.91	India	83.15
Mexico	22.74	China	52.46	China	63.94	China	59.51
India	22.13	Mexico	22.08	Philippines	29.80	Mexico	42.88
Nigeria	14.64	Philippines	21.56	Mexico	26.23	Philippines	34.91
France	14.21	France	19.90	France	24.07	Egypt	29.60
Philippines	13.73	Nigeria	19.74	Nigeria	20.63	Pakistan	26.11
Belgium	6.88	Germany	12.79	Pakistan	19.31	France	24.48
Germany	6.86	Egypt	12.45	Egypt	18.33	Bangladesh	21.75
Spain	6.66	Belgium	10.99	Germany	15.58	Germany	17.90
Poland	6.47	Bangladesh	10.85	Bangladesh	15.30	Nigeria	17.21

Source: World Bank, 2021; IOM, 2022

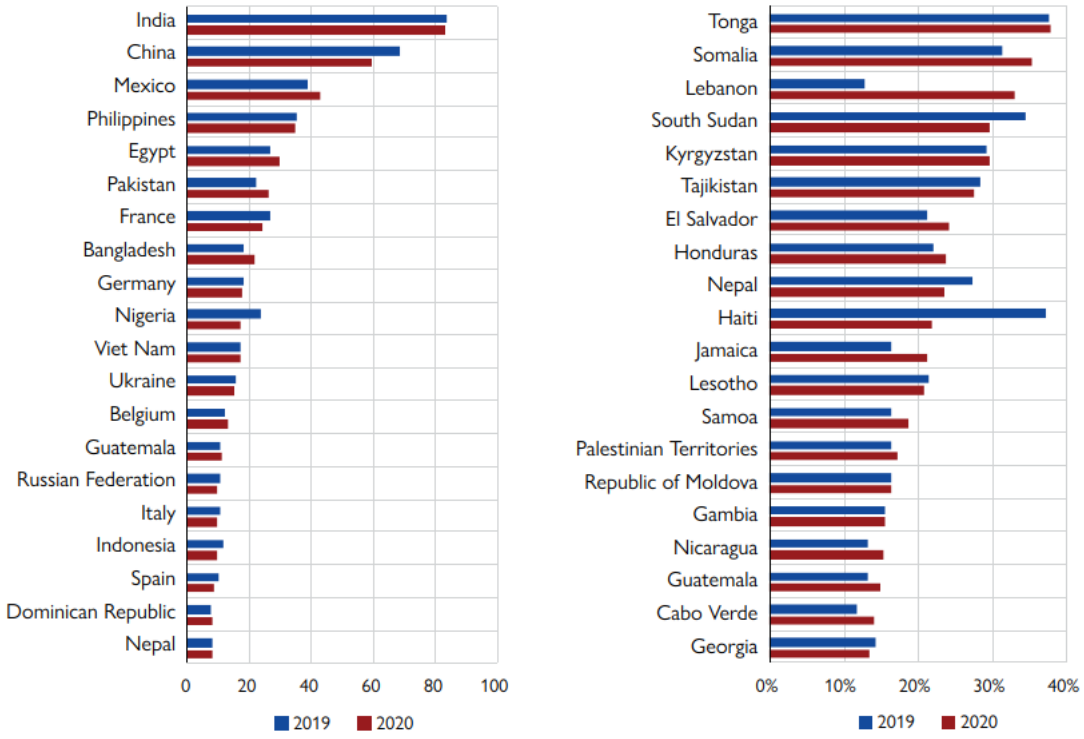
In the case of some countries, remittances are a significant part of people's livelihoods, although there is no consensus on how to define "overdependence" on international remittances. A high value of remittances as a proportion of GDP can have negative

14 Eurostat, 2020

economic consequences for several reasons, because it can reduce labor force participation in the labor market as remittances offer an alternative source of income and because an economy that relies heavily on remittances may have difficulty responding to unforeseen events, such as a pandemic or war, and is tied to the countries from which remittances originate.

The ratio of remittances to GDP gives a measure of the reliance of the country on remittances (see Figure 16). Out of 177 countries considered, 29 show a remittance/GDP ratio above 10% and 2 countries above 30% (3 countries in 2020). The country with the highest remittance-to-GDP ratio in the world in 2020 is Tonga (37.7%), followed by Somalia (35.3%), Lebanon (32.9%, rising sharply in 2020 from just over 10% in 2019), South Sudan (29.5%) and Kyrgyzstan (29.4%). The changes due to the pandemic mainly affected Lebanon, where the share of remittances in GDP tripled while its GDP collapsed, and Haiti, where on the contrary, the share of remittances in GDP halved due to limited access to local currencies and possible increased transfer costs.

Figure 16 - Top 20 recipient countries/territories of international remittances by total in USD billion (left) and share of GDP (right), 2019–2020



Source: World Bank, 2021; IOM, 2022

The countries from which remittances come are generally and historically high-income countries (see Table 7). The United States is consistently the top remittance sending

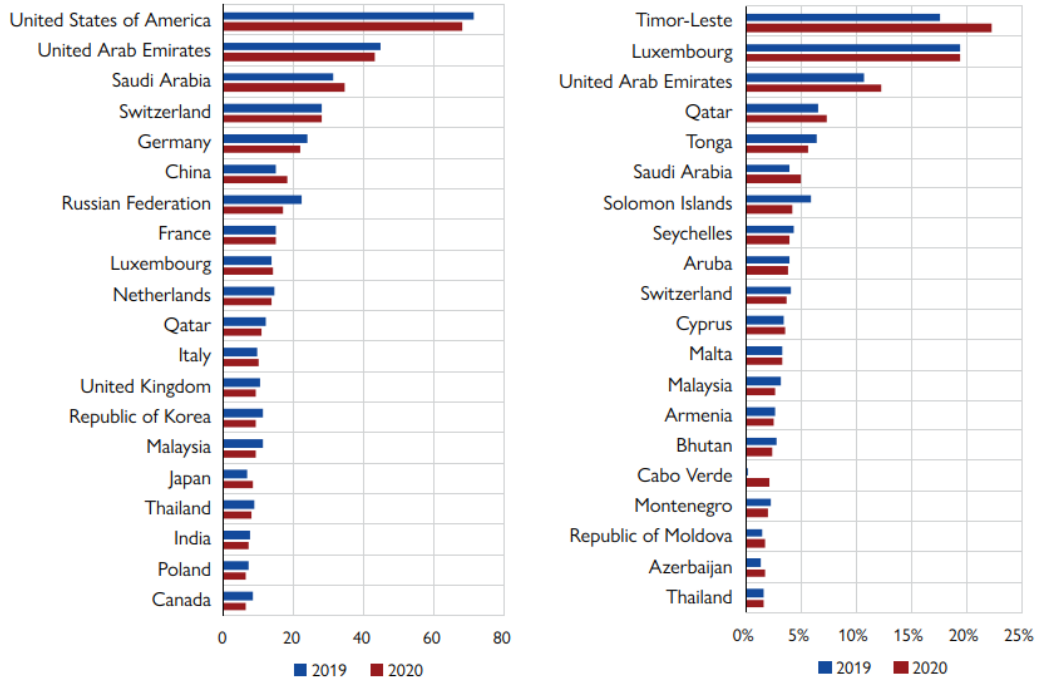
country in the world (USD 68 billion in 2020), followed by the United Arab Emirates (USD 43.24 billion), Saudi Arabia (USD 34.60 billion), Switzerland (USD 27.96 billion) and Germany (USD 22.02 billion). The sixth largest remittance sending country in 2020 was China (classified as an upper middle-income country by the World Bank) with USD 18.12 billion, making it both an important receiving and sending country.

Table 7 - Top 10 countries sending international remittances (2005–2020)

Top countries sending remittances							
2005		2010		2015		2020	
USA	47.75	USA	50.53	USA	60.72	USA	68.00
Saudi Arabia	14.30	Saudi Arabia	27.07	UAE	40.70	UAE	43.24
Germany	12.71	Russian Federation	21.45	Saudi Arabia	38.79	Saudi Arabia	34.60
Switzerland	10.86	Switzerland	18.51	Switzerland	26.03	Switzerland	27.96
UK	9.64	Germany	14.68	Russian Federation	19.69	Germany	22.02
France	9.47	Italy	12.88	Germany	18.25	China	18.12
Republic of Korea	6.90	France	12.03	Kuwait	15.20	Russian Federation	16.89
Russian Federation	6.83	Kuwait	11.86	France	12.79	France	15.04
Luxembourg	6.74	Luxembourg	10.66	Qatar	12.19	Luxembourg	14.20
Malaysia	5.68	UAE	10.57	Luxembourg	11.19	Netherlands	13.92

Source: World Bank, 2021; IOM, 2022

Figure 17 - Top 20 sending countries/territories of international remittances



Source: World Bank, 2021; IOM, 2022

1.4. Regional trends on migration

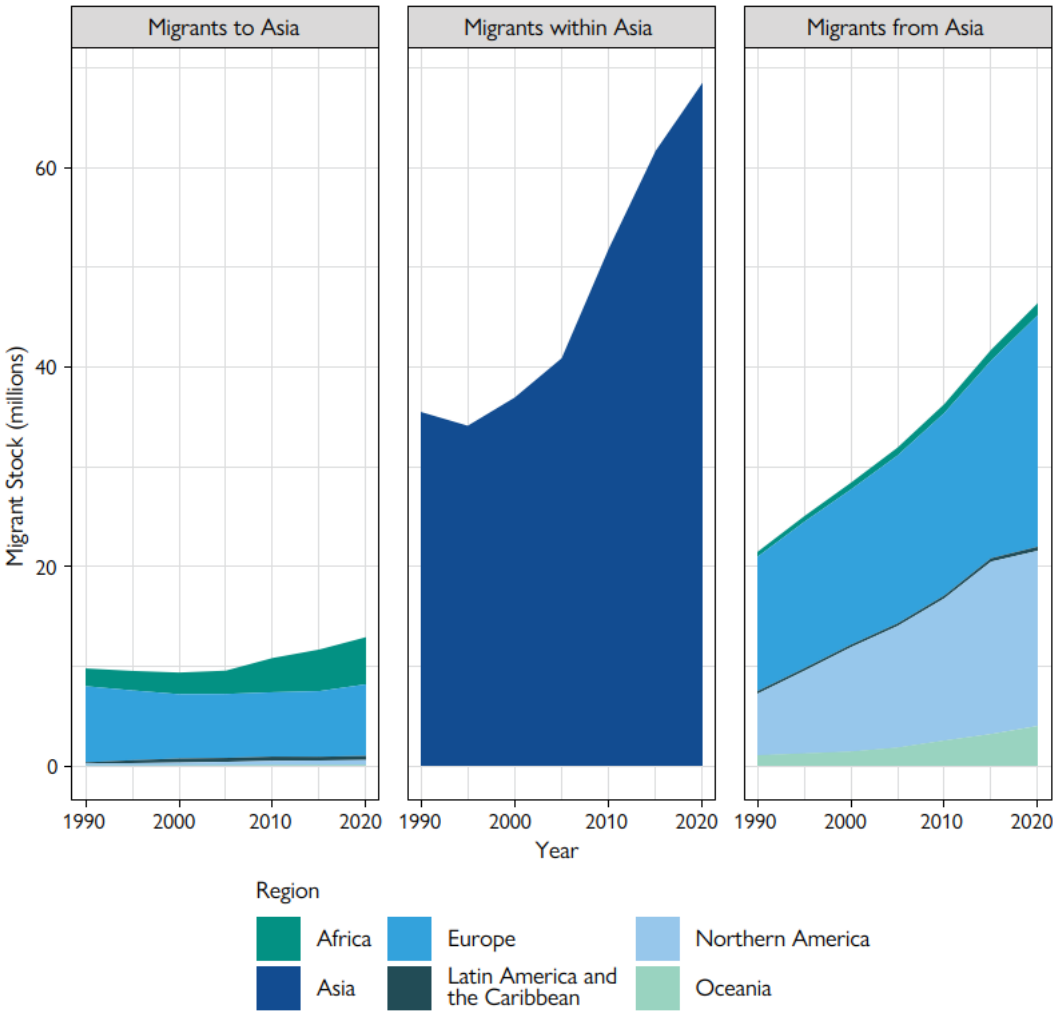
1.4.1. Asia

About 4.6 billion people were living in Asia in 2019[15]. The number of migrants of non-Asian origin living in the Asian continent has remained at relatively low levels since 1990 (see first panel of Figure 18). Among them, the main component is migrants of European origin, including those from the countries of the former Soviet Union. The group of migrants of African origin is also remarkable and it has grown over the past 3 decades.

In 2020, intra-regional migration between Asian countries had about 69 million Asians residing in other countries on the continent, up from 61 million in 2015 and 35 million in 1990 (see second panel of Figure 18). In the same year, more than 46 million migrants of Asian origin were living outside the Asian continent (see third panel of Figure 18), for a total of more than 115 million Asian migrants, about 40% of total migrants globally. Much of the 46 million extra-regional Asian migrants lived in Europe and North America. In fact, the number of migrants of Asian origin residing in Europe and North America has increased since the 2000s. In 2020, migration from Asia to Europe reached 23 million, up from nearly 20 million in 2015, while migration to North America increased from 17.3 million in 2005 to 17.5 million in 2020.

[15] The content in this subsection is based on and drawn from UN DESA, 2021a and OIM, 2022.

Figure 18 - Migrants to, within and from Asia, 1990–2020

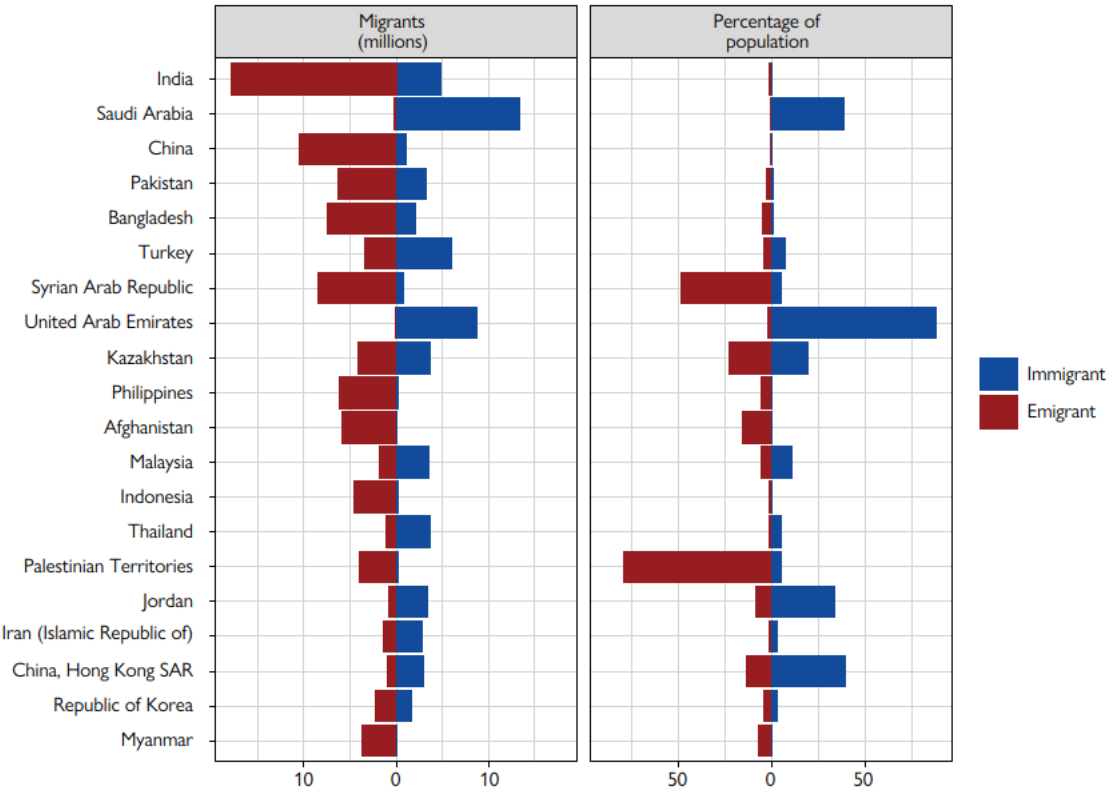


Source: UN DESA, 2021; IOM, 2022

Most migrants of Asian origin come from India and China, followed by Bangladesh and the Syrian Arab Republic (see Figure 19). More than 2 million Chinese migrants reside in the United States, in addition to other groups from India, the Philippines and Vietnam. Except for the Syrian Arab Republic, the proportion of migrants to the total population in these countries is very low unlike the Gulf Cooperation Council (GCC) countries. Indeed, in the GCC countries, migrants make up a large proportion of the total population, with peaks of 88 % in the United Arab Emirates, followed by 77 % in Qatar, 73 % in Kuwait and 55 % in Bahrain. Most migrants of non-Asian origin living in GCC countries come from Africa, while the largest number of migrants of Asian origin come from South and Southeast Asia (India, Pakistan, Bangladesh and Nepal and Indonesia and the Philippines, respectively).

Important historical events, such as the 1947 Partition for India and Pakistan and the Syrian Civil War for Syria were instrumental in causing the distribution of migrants that emerges from the current data (for example, in the case of India and Pakistan, 2020 data show that nearly 5 million Indians reside in Pakistan and over 3 million migrants from Pakistan reside in India).

Figure 19 - Top 20 Asian migrant countries/territories, 2020

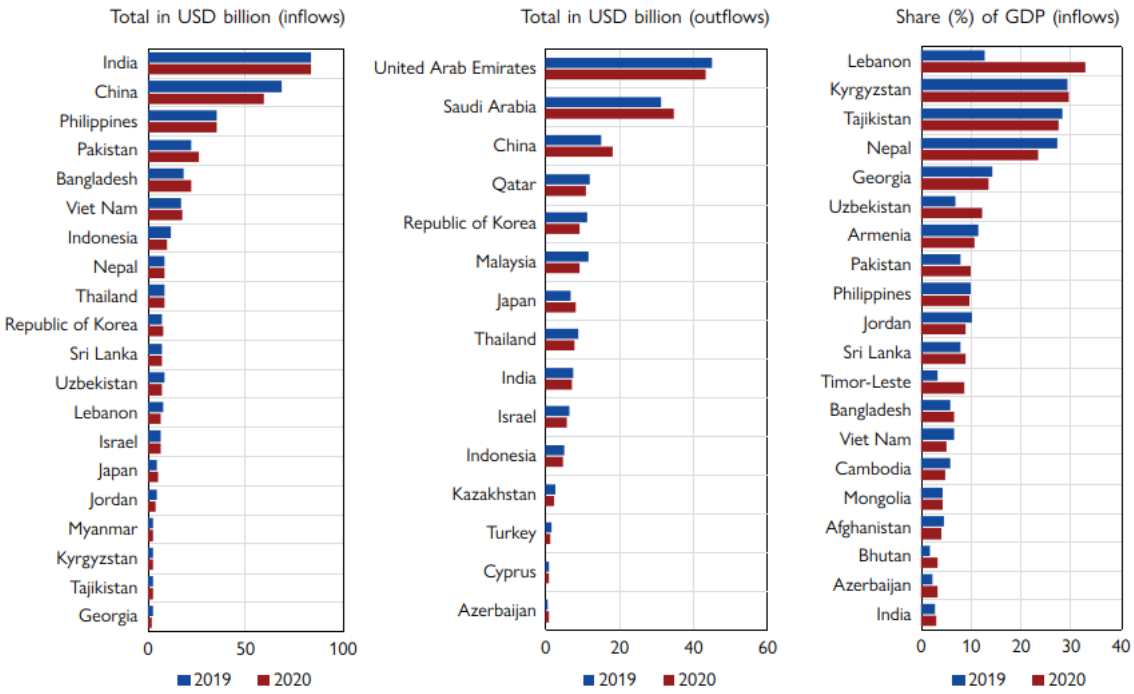


Source: UN DESA, 2021; IOM, 2022

Asian countries were among the first globally to adopt international movement and quarantine restrictions to contain the spread of COVID-19 (January 2020). As of mid-June 2021, some of these measures were still in place for most countries. The impact of these restrictions on the flows of remittances concerning Asia was not remarkable. In 2020, there was a reduction of about 2% in international remittances going to Asia compared to 2019 (a modest reduction compared to forecasts and mainly due to restrictions from COVID-19). If we look at the value of remittances as a percentage of GDP, the most significant recipients in 2020 were Lebanon (33%), Kyrgyzstan (29%), Tajikistan (27%) and Nepal (24%). In terms of absolute values, the Asian countries that received the most remittances were India and China have (over USD 140 billion in total), followed by the Philippines, Pakistan, and Bangladesh (see Figure 20). In India, the value

of remittances received amounted to USD 83 billion in 2020 (0.2 % decrease from 2019), while in Pakistan they increased by more than 17 % to a record high of USD 26 billion. On the other hand, with regard to outbound remittance values, the countries from which the largest flows were recorded were the United Arab Emirates and Saudi Arabia, amounting to USD 43 billion in 2020 (down from USD 45 billion in 2019) and USD 34 billion (up from USD 31 billion in 2019), respectively. Other countries from which there has been a significant outflow of remittances are China, Qatar, and the Republic of Korea.

Figure 20 - Top Asian international remittance recipient and source countries, 2019 and 2020



Source: World Bank, 2021; IOM, 2022

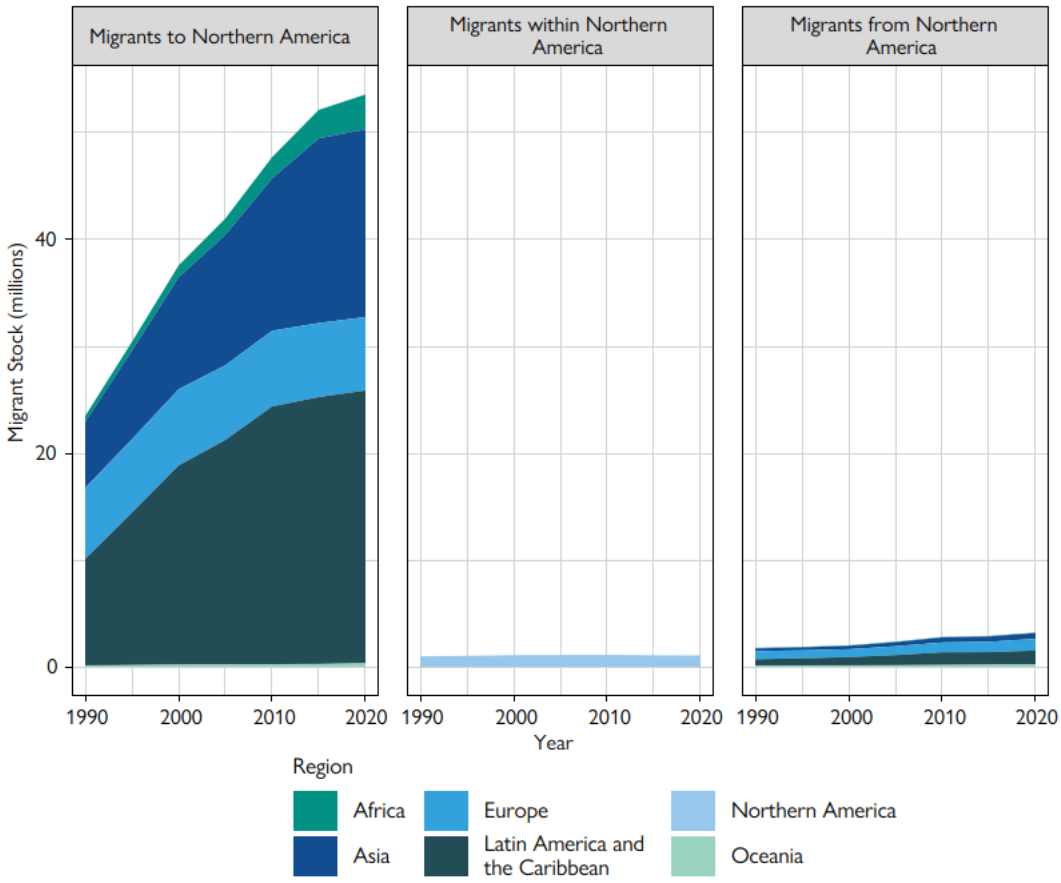
One of the main determinants of migration in Asia is labor. It is estimated that before 2020, the ASEAN region was home to about 10 million migrants, divided equally by gender. In terms of percentage of migrant workers out of total workers, the highest values are in the Arab states (40.8 %) where about 13.9 % of the world's migrant workers work. Most of these migrants come from Southeast and South Asian countries. Other interesting flows include those involving the Republic of Korea and Japan and those from the Pacific island areas to Australia and New Zealand.The main type of work performed by migrants in the region is temporary in nature and involves occupations requiring low or medium skills. At the same time, a significant outflow of high-skilled migrants departs from the region, headed mainly from China, India and the Philippines to OECD countries. The

various migration corridors are characterized by occupations that are highly distinct on the basis of gender. Thus, it is found that women migrate mainly from Sri Lanka, Indonesia and the Philippines to perform domestic work, and find more employment opportunities in Southeast Asia (manufacturing, agriculture, hospitality and, to a lesser extent, construction) while men have more opportunities in the industrial and construction sectors in Gulf Cooperation Council (GCC) countries and in the fishing sector in East and Southeast Asia, as well as in New Zealand and Australia for seasonal work.

1.4.2. America

Over the past 30 years, the number of migrants in North America has more than doubled. If we only look at the last few years, in 2020, some 59 million migrants from various regions of the world resided in North America, still up by 3 million compared to 2015. The areas of origin of these migrants are mainly Latin America and the Caribbean (about 26 million), followed by Asia (18 million) and Europe (about 7 million) (see first panel, Figure 21). The number of intra-regional North American migrants is very small, just over 1 million) compared to North American migrants living outside North America (about 3 million) (see second and third panel, Figure 21).

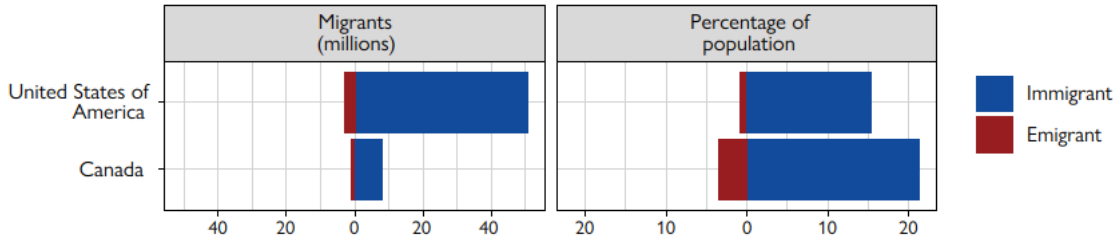
Figure 21 - Migrants to, within and from North America, 1990–2020



Source: UN DESA, 2021; IOM, 2022

In 2020, about 86% of the foreign-born population in North America lived in the United States. Moreover, as mentioned earlier, the United States is the host country for the largest number of immigrants worldwide. In terms of the percentage of immigrants in the total resident population, Canada surpasses the United States, with 21 per cent versus 15 per cent respectively (second panel Figure 22). Canada also surpasses the United States with respect to the percentage of the population that emigrated abroad.

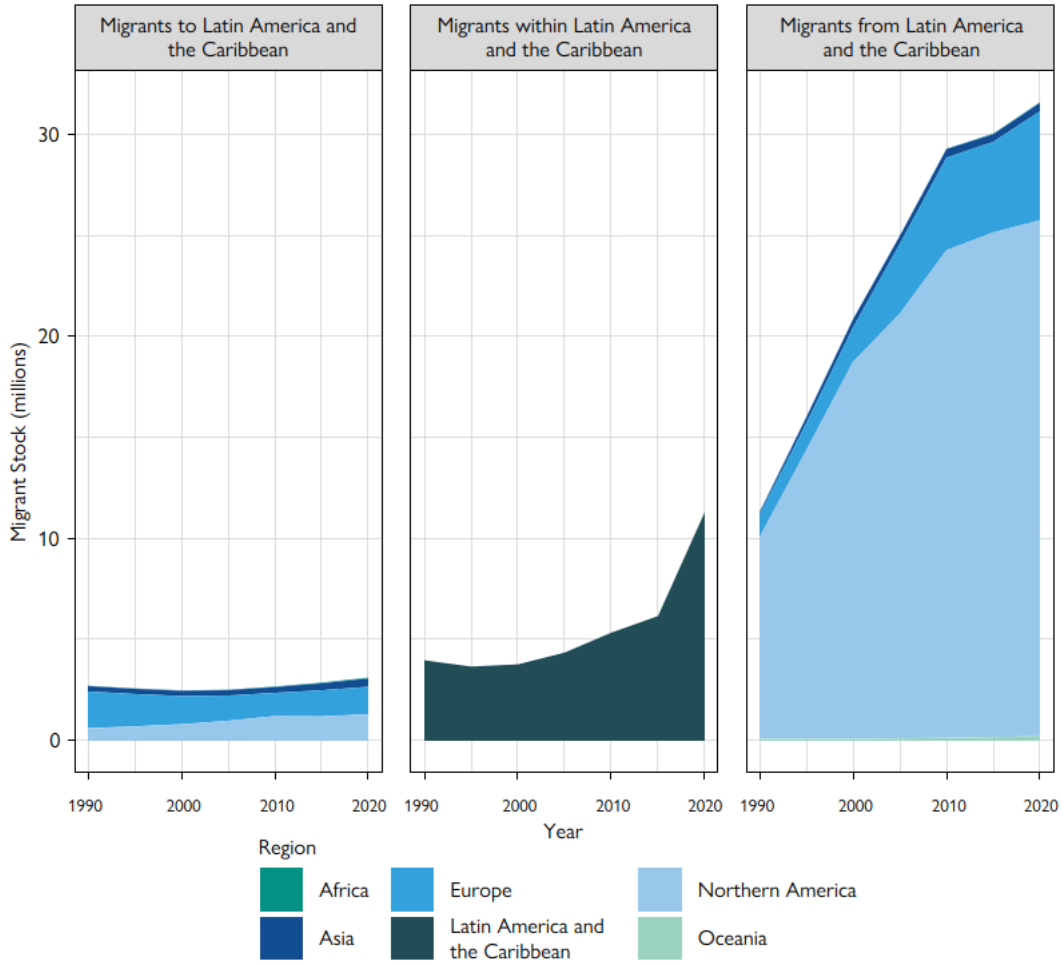
Figure 22 - Main migration countries in Northern America, 2020



Source: UN DESA, 2021; IOM, 2022

As noted, most migrants from the Latin American and Caribbean region live in North America (over 25 million in 2020, increasing since 1990 - see third panel Figure 23) followed by Europe (5 million in 2020, a more than fourfold increase since 1990). Only a small fraction of Central and South American migrants live in other regions, such as Asia and Oceania (in 2020, over 400,000 and 200,000 migrants, respectively). Over the past 30 years, the total number of foreign migrants in the Central and South American region has remained stable at around 3 million. Most of these migrants come from Europe and North America, in 2020 about 1.4 million and 1.3 million respectively (see panel 1, Figure 23). The number of interregional migrants, on the other hand, is around 11 million (panel 2, Figure 23). On these numbers, the Venezuelan crisis had a strong impact with 5.6 million people having to leave the country (June 2021) mainly heading to Colombia, Peru, Chile, Ecuador and Brazil.

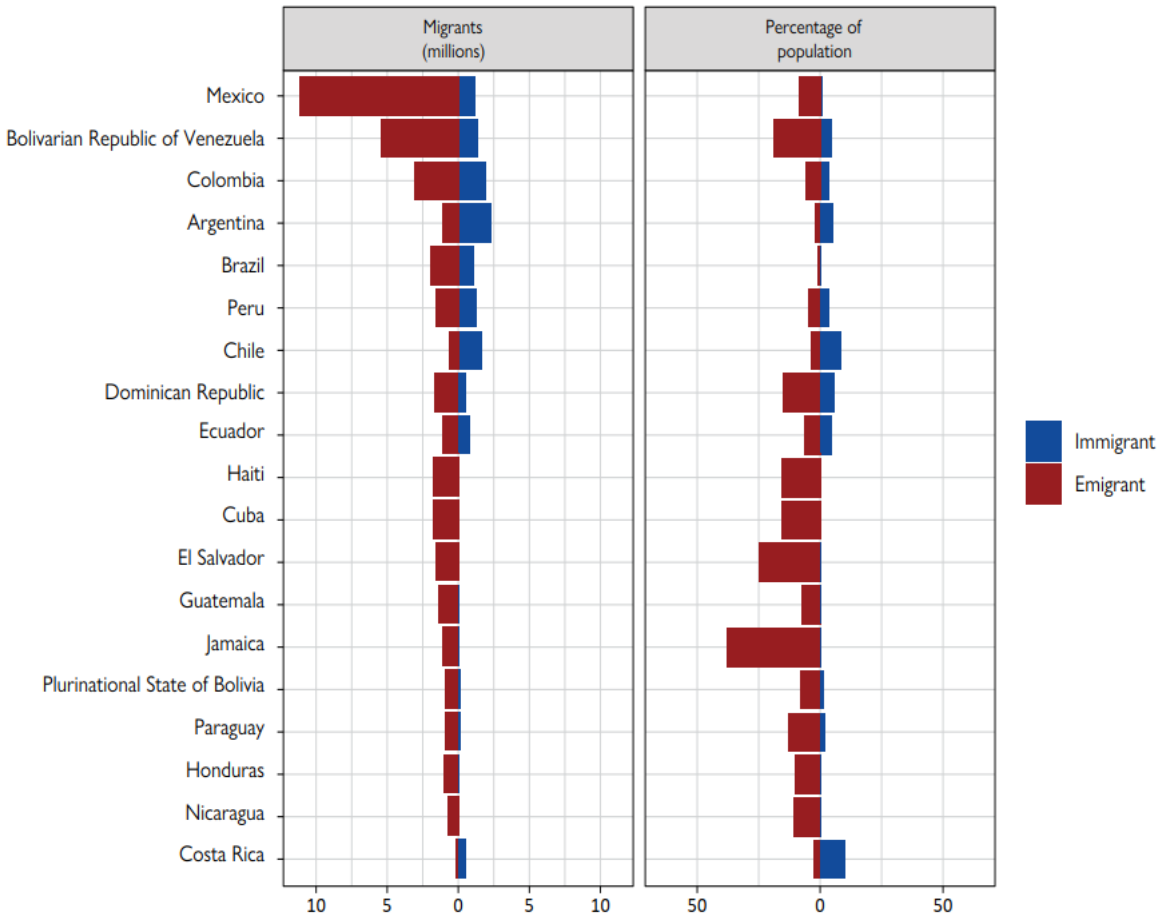
Figure 23 - Migrants to, within and from Latin America and the Caribbean, 1990–2020



Source: UN DESA, 2021; IOM, 2022

About 11 million Mexicans lived abroad in 2020, making it the American country with the largest number of emigrants, most of them living in the United States. This high number of emigrants makes Mexico the second largest diaspora country in the world after India (Figure 24). Venezuela and Colombia follow Mexico, with over 5 and 3 million emigrants, respectively. With regard to the percentage of the immigrant population in the total population, Jamaica ranks first, followed by El Salvador and Venezuela (Figure 24). In 2020, the country with the highest number of interregional immigrants was Argentina (with more than 2 million immigrants, mainly from neighboring countries such as Paraguay and Bolivia), followed by Colombia and Chile. Among the countries with the highest number of people emigrating abroad is Costa Rica, where 10% of the population lives abroad, closely followed by Chile.

Figure 24 - Top Latin America and Caribbean migrant countries, 2020

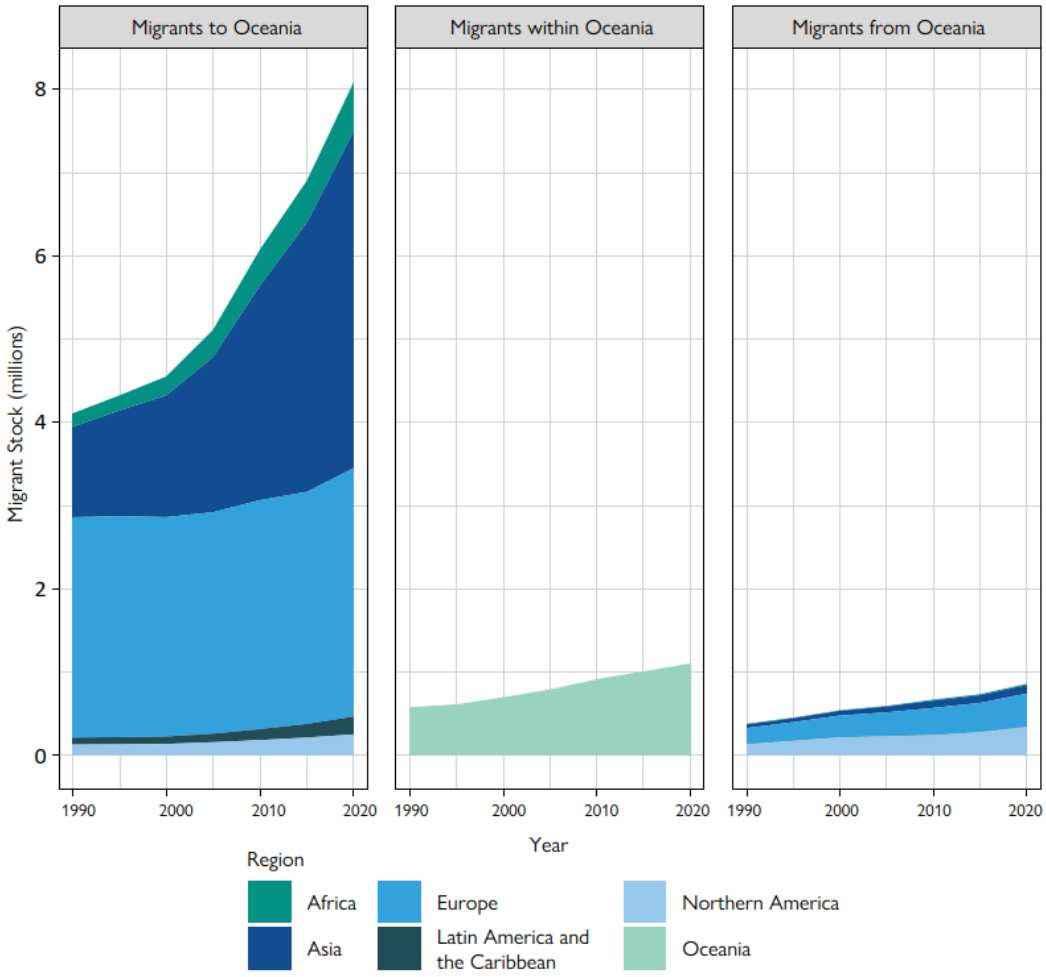


Source: UN DESA, 2021; IOM, 2022

1.4.3. Oceania

Oceania is the continent with the lowest number of people migrating out of the region. The areas to which they migrate most are Europe and North America. In 2020, about 8.3 million migrants lived in Oceania, mainly from Asia and Europe.

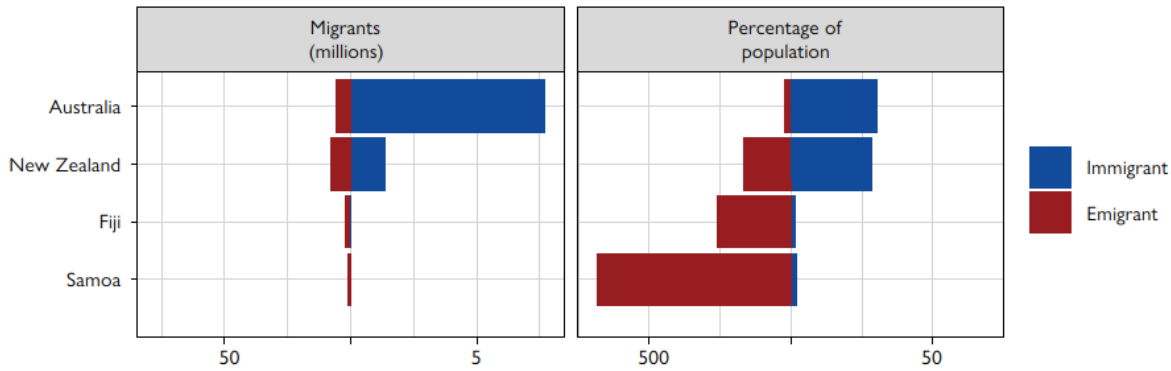
Figure 25 - Migrants to, within and from Oceania, 1990–2020



Source: UN DESA, 2021; IOM, 2022

The majority of migrants in Oceania are concentrated in Australia and New Zealand. The vast majority of international migrants in Oceania lived in Australia or New Zealand (Figure 25). In terms of the percentage of overseas migrants in the total population, Samoa and Fiji have the highest numbers, with their migrants mainly going to Australia and New Zealand. Australia and New Zealand have high shares of the foreign-born population in the total population, around 30% and 29% respectively.

Figure 26 - Main migration countries in Oceania, 2020

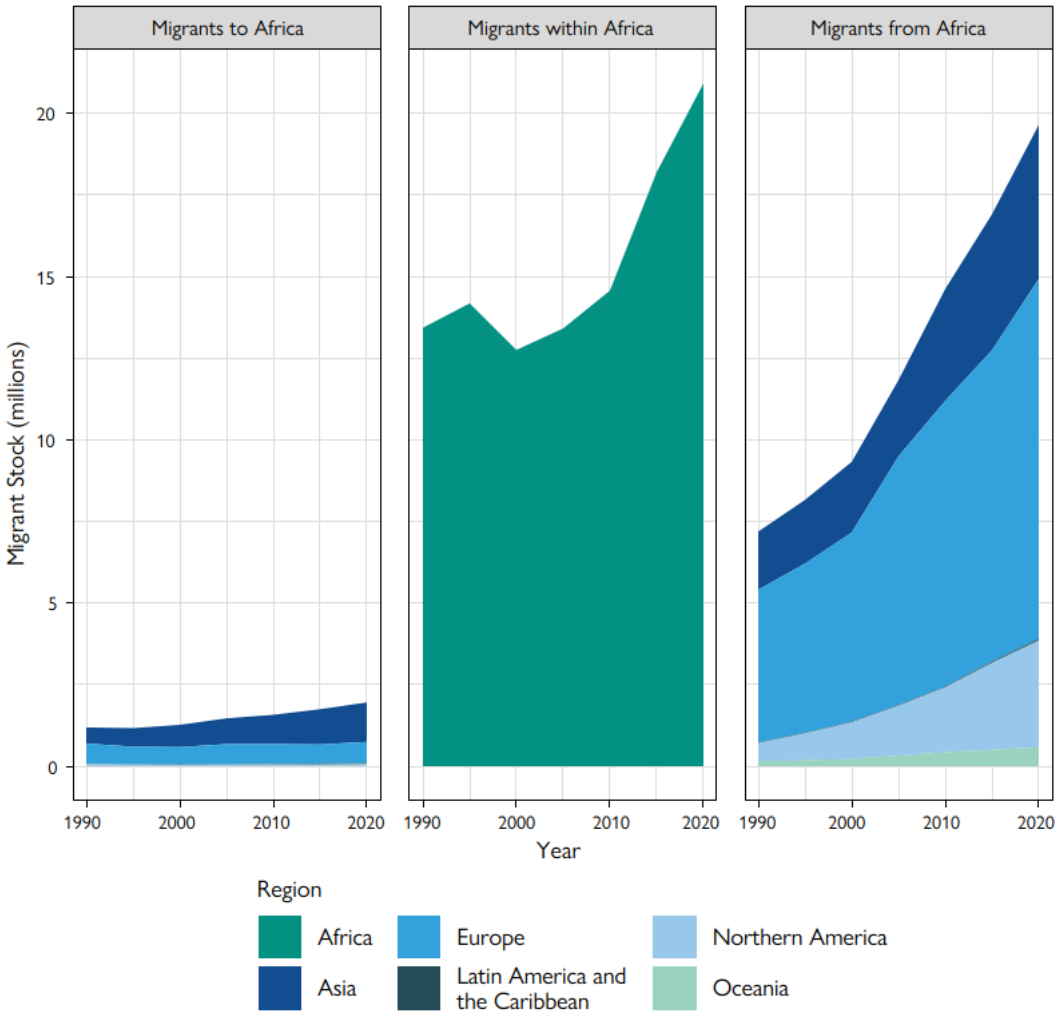


Source: UN DESA, 2021; IOM, 2022

1.4.4. Africa

Differently from Oceania, Africa is heavily involved in migration flows, both interregional and external. In 2020, interregional migrants amounted to 21 million people (1.6% of the African total population), an increase of 3 million since 2015. The number of people born in Africa living abroad also increased from about 17 million in 2015 to over 19.5 million (1.5% of the total African population) in 2020. Of these, most live in Europe (11 million – 56.4%), Asia (almost 5 million – 25.5%) and North America (about 3 million – 15.4%). The number of people born outside the African continent who later moved to Africa is very small (about 2 million) and includes people mainly from Asia and Europe.

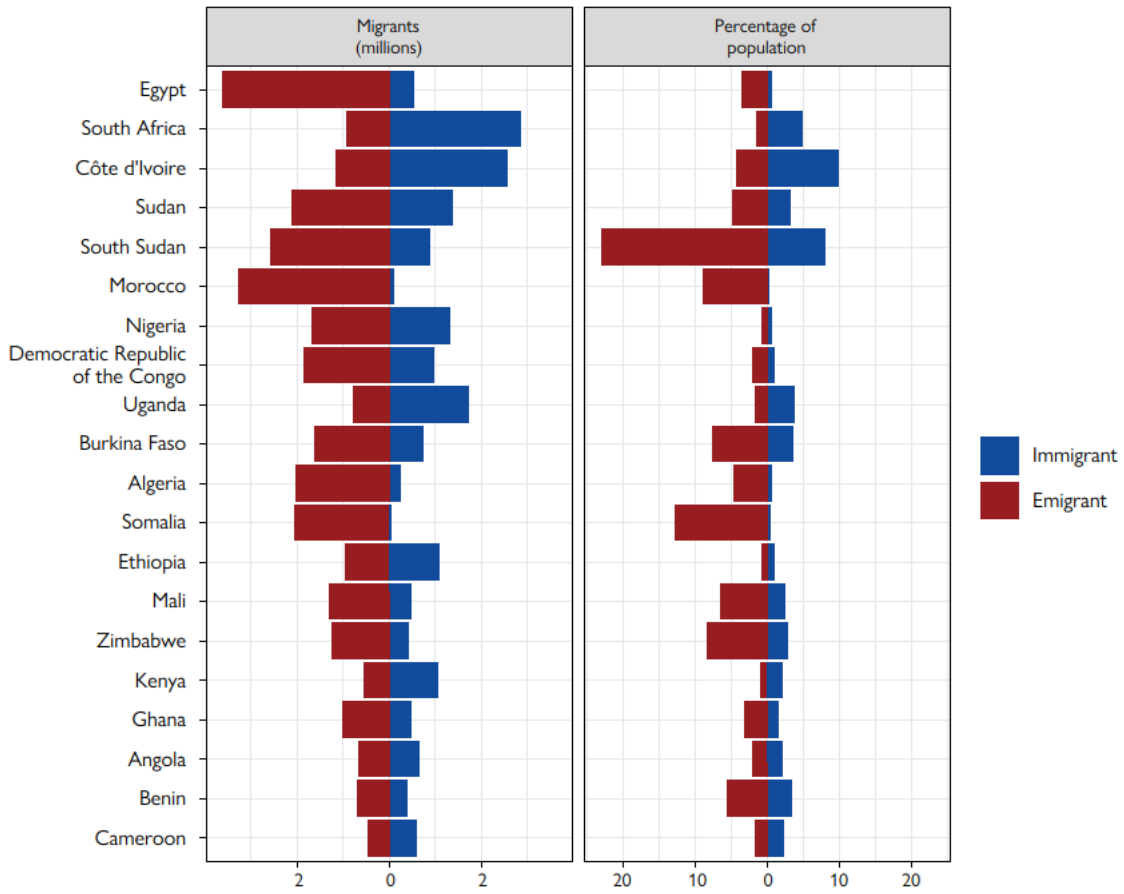
Figure 27 - Migrants to, within and from Africa, 1990–2020



Source: UN DESA, 2021; IOM, 2022

The African countries from which the largest number of people emigrate are those in the north of the continent, first and foremost Egypt (almost 4 million), followed by Morocco (over 3 million in 2020) and South Sudan (almost 3 million) and then Sudan, Somalia, and Algeria (about 2 million). With nearly 3 million migrants, South Africa is the top African destination state for migration flows with about 2.9 million international migrants residing in the country (a decrease of more than 9% from 3.2 million in 2015) and a foreign population share of 5%. Other countries with a high proportion of migrants to the total population are Côte d'Ivoire (10%) and South Sudan (about8 %), which also has a very high proportion of people migrating to the total population (over 20%).

Figure 28 - Top 20 African migrant countries, 2020



Source: UN DESA, 2021; IOM, 2022

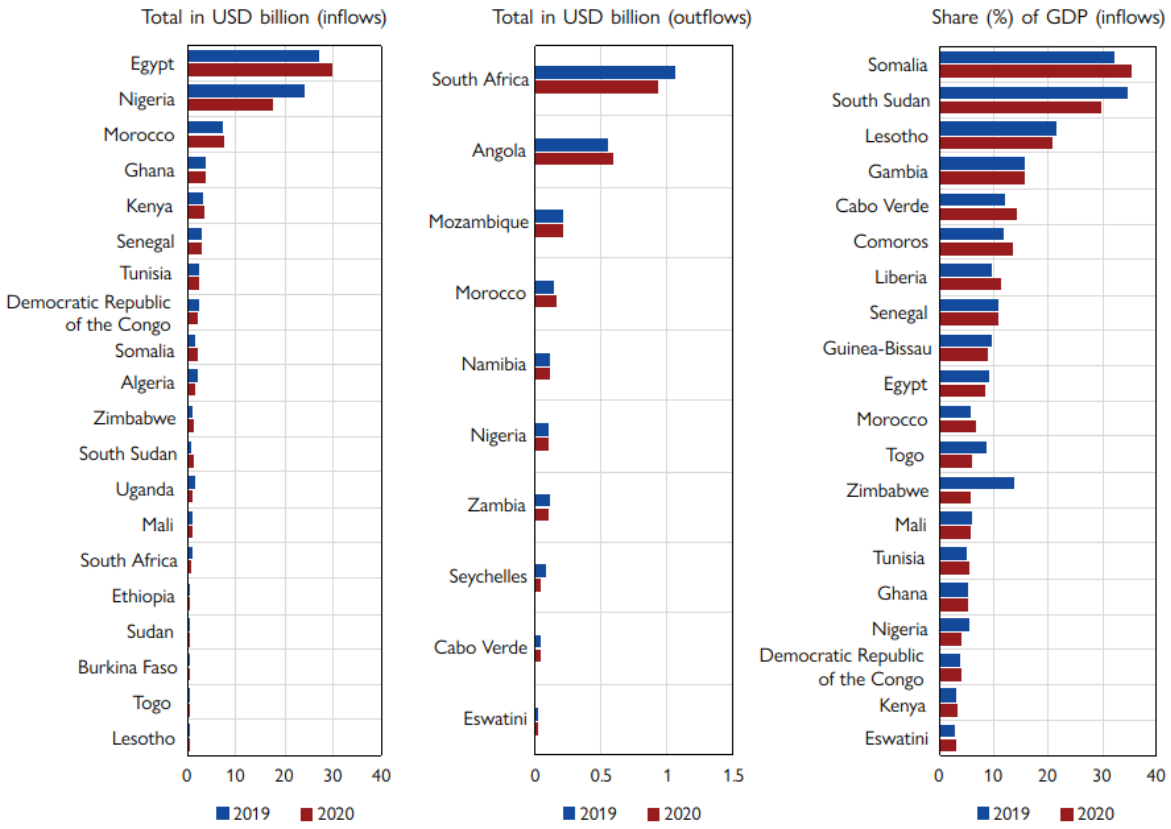
A large proportion of remittances sent by African nationals who migrated abroad went to Egypt, Nigeria, Morocco, Ghana and Kenya (see Figure 29). In 2020, Egypt and Nigeria accounted for 56 % of total remittance flows to the region, with USD 30 billion and more than USD 15 billion respectively. In 2020, the decline in remittances resulting mainly from the covid-19 pandemic was 3% overall but manifested differently depending on the country considered. The 28% drop in remittance flows to Nigeria greatly affected the total calculation, as Nigeria is the second largest destination country for these flows. On the other hand, the increase in flows to Egypt and Morocco resulted in an overall increase of 6 % (if we exclude precisely the case of Nigeria from the calculation).

From the perspective of remittance sending, the main source countries in 2020 were South Africa and Angola, with outflows from these two countries amounting to approximately USD 921 million and USD 576 million in 2020, respectively. While outflows from South Africa decreased in 2020 compared to 2019, those from Angola,

Mozambique, and Namibia, the second, third, and fifth largest remittance source countries, increased.

As mentioned earlier in this chapter, the economies of some African states are also highly dependent on remittances, and this is evidenced by the high percentage of remittances calculated as a percentage of total gross domestic product (GDP). In this case, the top five countries for which this dependence is most significant in 2020 were Somalia (35%), followed by South Sudan (30%), Lesotho (21%), Gambia (16%) and Cape Verde (14%).

Figure 29 - Top African international remittance recipient and source countries, 2019 and 2020



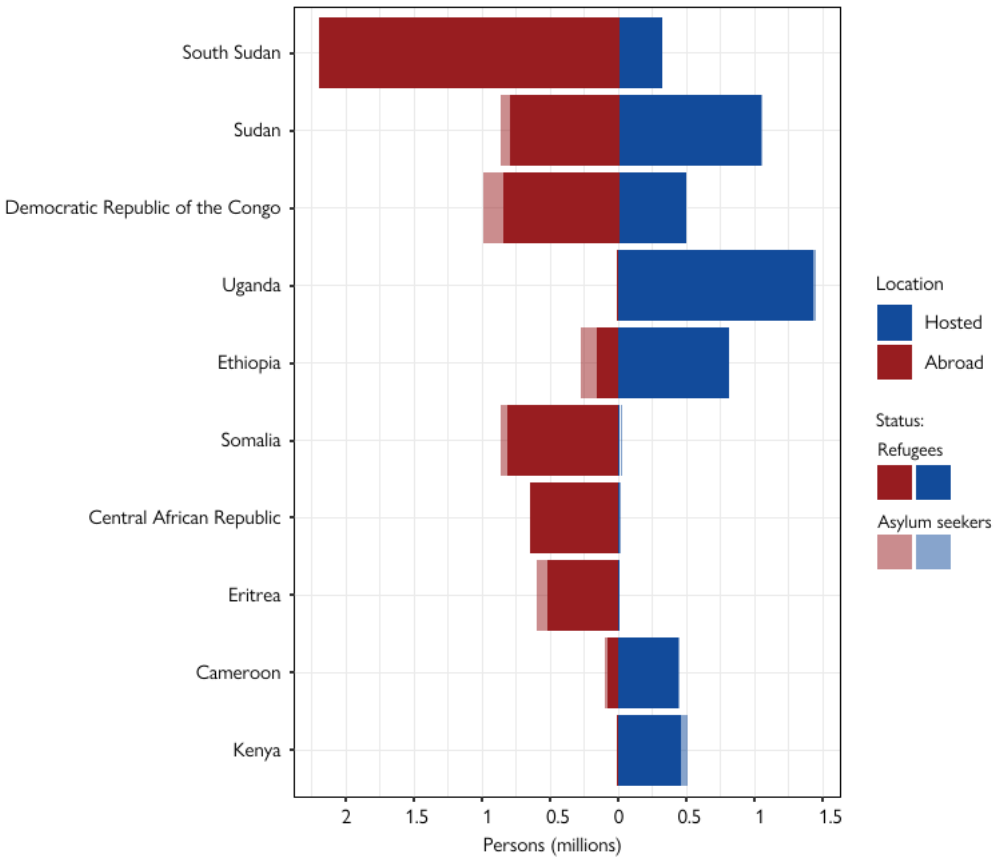
Source: World Bank, 2021; IOM, 2022

Internal migration flows within the African continent are very frequent and significant because most refugees from conflict zones and asylum seekers seek hospitality in neighboring countries (Figure 30). Among the receiving countries, Uganda is the leading country in Africa with about 1.5 million people hosted, followed by Sudan (over 1 million) and Ethiopia (almost 800,000). In addition to being the largest refugee host country on the African continent, Uganda is the fourth largest in the world after Turkey,

Colombia and Pakistan; most of the people hosted are from South Sudan and the Democratic Republic of Congo. Other major countries hosting refugees in 2020 were Sudan and Ethiopia.

With regard to the countries from which the flows originate, South Sudan was first in Africa in 2020 (over 2 million) and fourth globally after the Syrian Arab Republic, the Bolivarian Republic of Venezuela, and Afghanistan. Most of the refugees from South Sudan headed to neighboring Uganda, which is why Uganda ranks first among refugee-hosting countries. South Sudan is followed by the Democratic Republic of Congo (one million refugees and asylum seekers migrated out of the country), Sudan and Somalia (with over 700,000 refugees and asylum seekers each), countries in which there are protracted conflicts.

Figure 30 - Top 10 African countries by total refugees and asylum seekers, 2020

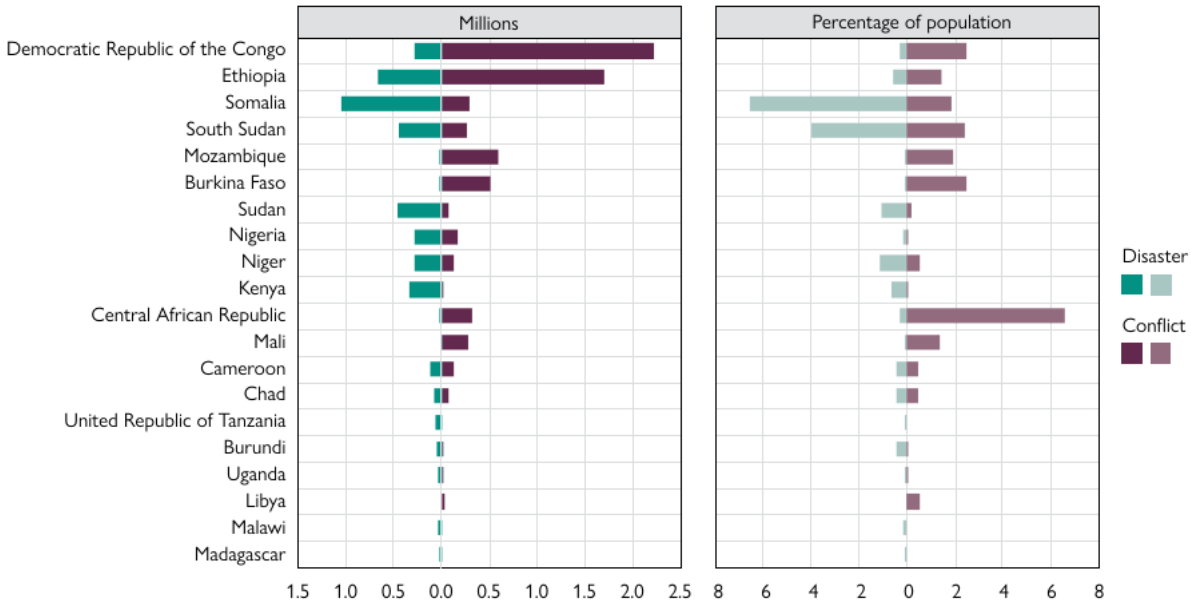


Source: UNHCR, n.d.a.; IOM, 2022

Sub-Saharan Africa gave rise to the largest number of internally displaced persons in 2020 due to conflicts and disasters (Figure 31). The most conflict-affected countries in

2020 were the Democratic Republic of Congo and Ethiopia, from which over 2 million and over 1.6 million IDPs originated, respectively. The Central African Republic also had a high number of displaced persons as a proportion of its national population (about 7%). The countries from which the largest number of displaced persons originated due to disasters were Somalia, due to flooding, Ethiopia, and Sudan.

Figure 31 - Top 20 African countries by new internal displacements (disaster and conflict), 2020



Source: IDMC, n.d.; UNDESA, 2021; IOM, 2022

1.4.4.1. Sub-Saharan migration

Labor migration, whether interregional or external to the region, is very common in West, East and Southern Africa and has increased over the years, driven in part by the growth of migrant workers in the subregion.[16] In order to facilitate border crossings for labor and market integration, negotiations have been initiated and have had some success, such as in the case of the East African Common Market Protocol, although it still faces significant implementation challenges.[17] Other recent agreements, such as the Free Movement and Transhumance Protocol approved in June 2021, could also further accelerate intra-regional migration once ratified and implemented by the member states of the Intergovernmental Authority on Development (IGAD).[18] Other regional economic communities, such as the Common Market for Eastern and Southern Africa (COMESA),

16 African Union, 2020a, 2020b.
17 Okunade, 2021.
18 IGAD, 2021.

have also developed programs to further facilitate regular labor migration between member states.[19] As in East Africa, there has also been an increase in the number of international migrant workers within the Southern African Development Community (SADC), which includes migrant workers from within and outside Southern Africa.[20] The number of international migrant workers within the SADC has also increased.

A large proportion of sub-Saharan migrants also migrate outside the subregion. A growing number of migrants from Uganda, Kenya, and Ethiopia have migrated to Gulf countries; other important destinations have been North America and Europe. In 2020, for example, the largest Kenyan diaspora resided in the United States (nearly 157,000 people) and the United Kingdom (about 139,000 people).[21] This has resulted in significant inflows of international remittances entering sub-Saharan Africa in recent years. Kenya, for example, was the third largest recipient of remittances in sub-Saharan Africa after Nigeria and Ghana, with or over USD 3 billion in 2020 (up 9 % from 2010). [22] This growth in remittance flows to Kenya has been largely driven by increased flows from the United States. Other countries in the subregion with significant numbers of people living abroad, such as Somalia and Uganda, rank among the top 10 remittance recipients in sub-Saharan Africa. South Africa is an important destination for many migrants in the subregion and is the largest source of remittances in Africa.

1.4.5. Europe

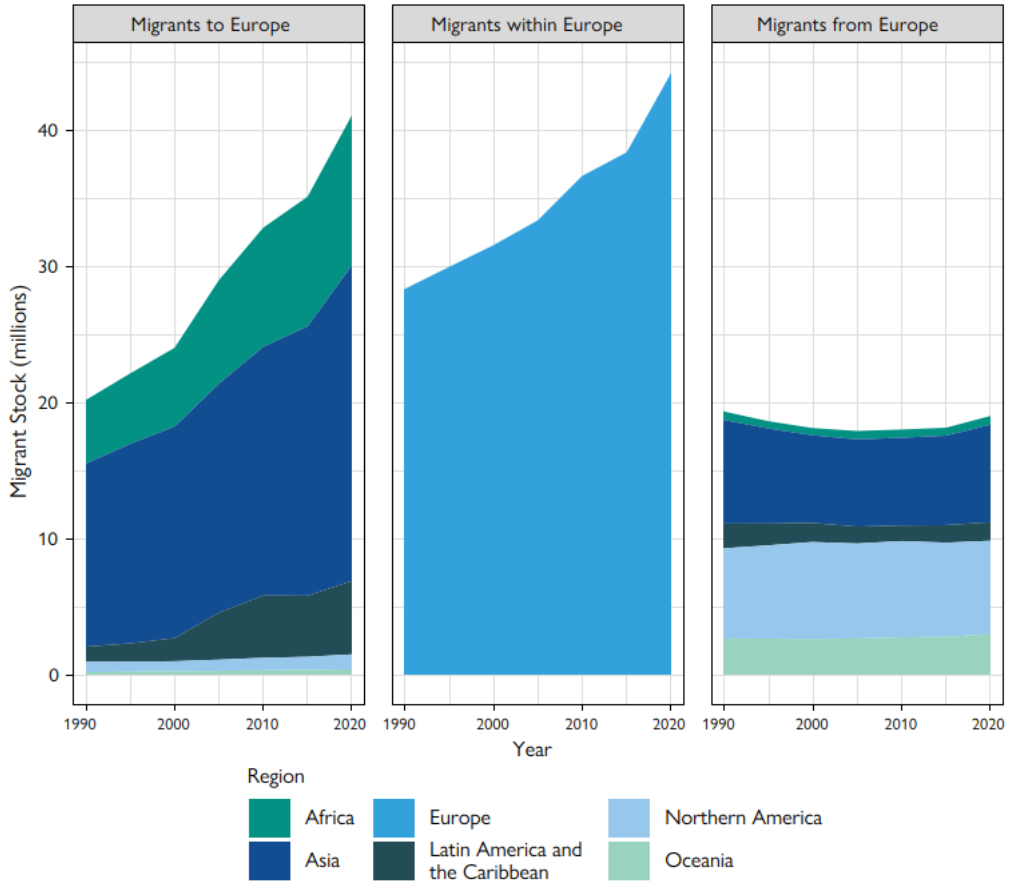
About 75 million international migrants were living in Europe in 2015. This number grew by 16% in five years, reaching nearly 87 million in 2020. Of these, just under half (about 40 million, see first panel Figure 32) are migrants from other continents, while just over 50 % (44 million, see second panel Figure 32) are interregional migrants, that is, born in one European country but residing in another European country, up from 38 million five years earlier.

After a reduction since 1990, in 2020 Europeans residing outside the European continent amounted to about 19 million (roughly the same number as in the early 1990s).

19 COMESA, 2019.
20 African Union, 2020c
21 UN DESA, 2021.
22 World Bank, 2021.

Of these, most were in Asia and North America, followed by Oceania (see third panel Figure 32).

Figure 32 - Migrants to, within and from Europe, 1990–2020



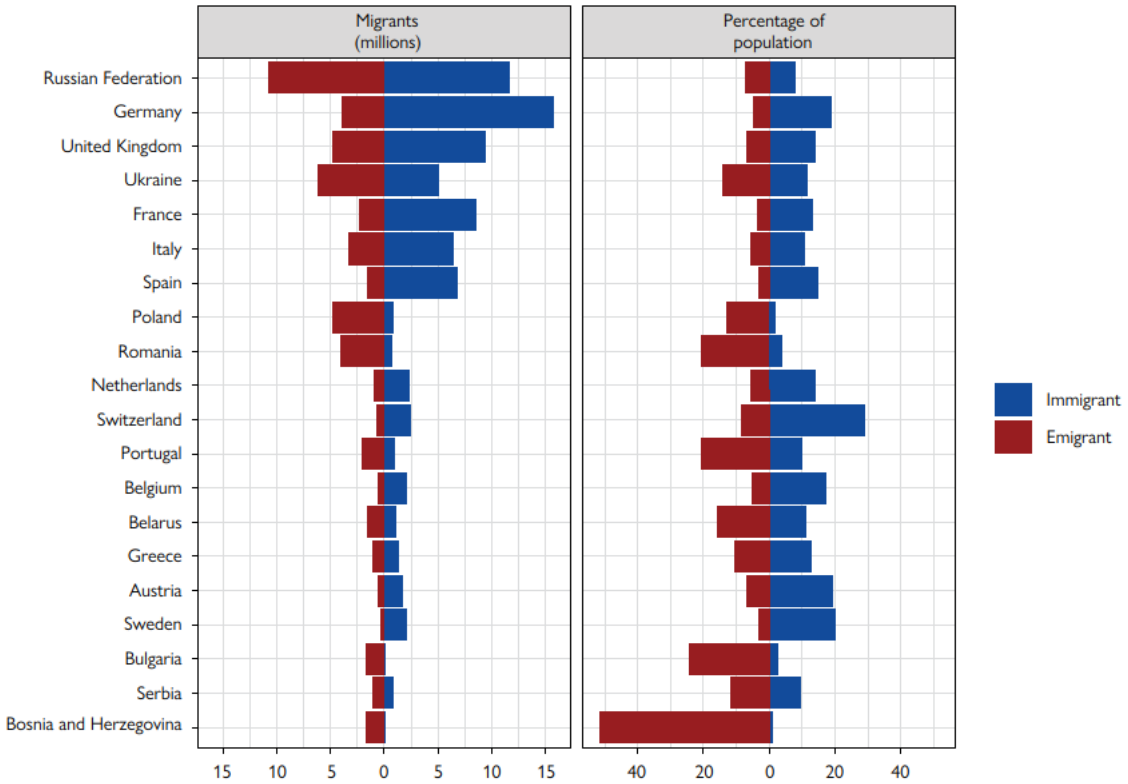
Source: UNDESA, 2021; IOM, 2022

In 2020, the European countries with the highest absolute values of people who migrate abroad are mainly some of the Eastern countries, first among them the Russian Federation (11 million), followed by Ukraine (about 6 million), Poland (4.8 million) and Romania (about 3 million) (Figure 33). The United Kingdom also ranks at the top of the list, in fourth position with about 4.7 million emigrants. With regard to relative values, i.e., the ratio of the number of people who emigrated abroad to the total population, the largest share (approximately 50%) was recorded in Bosnia and Herzegovina in 2020, a figure that can probably be attributed to the breakup of the former Yugoslavia. Bosnia and Herzegovina are followed by Bulgaria (about 30 %), Portugal (20 %) and Romania (about 20 %). With nearly 16 million immigrants in 2020, Germany had the largest foreign-born population of any European country.

With regard to foreign migrants residing in European countries, the largest number in absolute terms is in Germany (more than 15 million, nearly 20 % of the total population), with an increase of more than 5 million between 2015 and 2020. The largest groups came from Poland, Turkey, the Russian Federation, Kazakhstan and the Syrian Arab Republic. The Russian Federation ranks after Germany (about 12 million foreign migrants), followed by the UK (9.4 million) and France (8.5 million). The largest groups of migrants living in the UK come from India, Poland, and Pakistan, while as far as France is concerned, the most populous group is of North African origin. Spain and Italy follow France with about 6.8 million and 6.4 million foreign-born people, respectively, both up from 2015. In these two countries, the largest component of immigrants is migrants from other European countries, such as Romania and Albania-or from North African and Latin American countries such as Morocco, Colombia and Ecuador.

With regard to relative values, the largest percentages in terms of foreign-born people in the total native population are recorded in Switzerland (29%), followed by Sweden (20%), Austria (19%) and Germany (19%).

Figure 33- Top 20 European migrant countries, 2020



Source: UNDESA, 2021; IOM, 2022

As of 1 January 2020, legally resident foreigners in the EU correspond to 8.3% of the total population, with more than half of the total concentrated in the five most populous countries. In the latter, the incidence of the resident foreign population varies from 7.6% in France to 12.5% in Germany; however, several countries, even smaller than the above-mentioned ones, have higher incidences (just think of Luxembourg or Malta). Italy, in this special ranking, is in 15th place, with a share of 8.4%.

1.4.5.1. Italy

Observing the importance of legal-administrative features (such as the revision of the registry office or the acquisition of Italian citizenship) in comparison with the "pure" demographic dynamics, in the long term the foreign presence in Italy has been subject to ups and downs in the pace of growth, positive in the first part of the last decade and then moving to a slight contraction in 2021. As of 1 January 2020, the most representative foreign communities are those of Romanian (more than 1 million people), Albanian (around 422.000 people) and Moroccan citizenship (414.000 people). Over the past two years, these communities have undergone slight variations, either increasing or decreasing. On the other hand, between 2019 and 2020, the presences of other nationalities, which in absolute terms show lower numbers than the previous ones, increased. These trends include the Egyptian (+6.9%), British (+6.5%), Bangladeshi (+6.0%) and Brazilian (+4.7%) communities. Finally, strongly negative demographic dynamics characterized the Serbian community, whose number of migrants decreased between 2018 and 2019 by 10.4% and by a further 6.3% between 2019 and 2020, as well as the Macedonian (2018/2019: -7.3%; 2019/2020: -7.9%), Polish (2018/2019: -7.2%; 2019/2020: -2.3%) and Ecuadorian (2018/2019: -7.1%; 2019/2020: -2.7%) communities.

Citizens belonging to non-EU foreign communities in our country amounted to 3,616 million in 2020. According to ISTAT data[23], the areas of origin most represented are the African and Asian continents, respectively reproducing 30% of the total number of non-EU foreigners; the presence of American citizens is significantly lower while, at the bottom of the ranking, citizens without nationality and those coming from the oceanic continent. Considered by single national component, the Moroccan and Albanian communities share the record for the largest presence on the national territory, registering more than 400,000 citizens per community; on the contrary, the least represented

23 ISTAT survey "Regularly residing non-EU citizens" based on data from the Ministry of the Interior.

countries are the communities of Guinea and Argentina with 0.2% of the total number of non-EU citizens legally residing.

As regards the incidence of women belonging to individual communities, Russia (81.2%), Georgia (82.2%) and Ukraine remain fixed in the top positions, although high quotas are registered as well for the Brazilian and Cuban communities. The age breakdown of non-EU citizens is interesting: as many as 50% are under the age of 35, an age bracket significantly covered by individuals with citizenship of an African country. An above-average presence of young people under 35 is also found in Asian communities (51.7%).

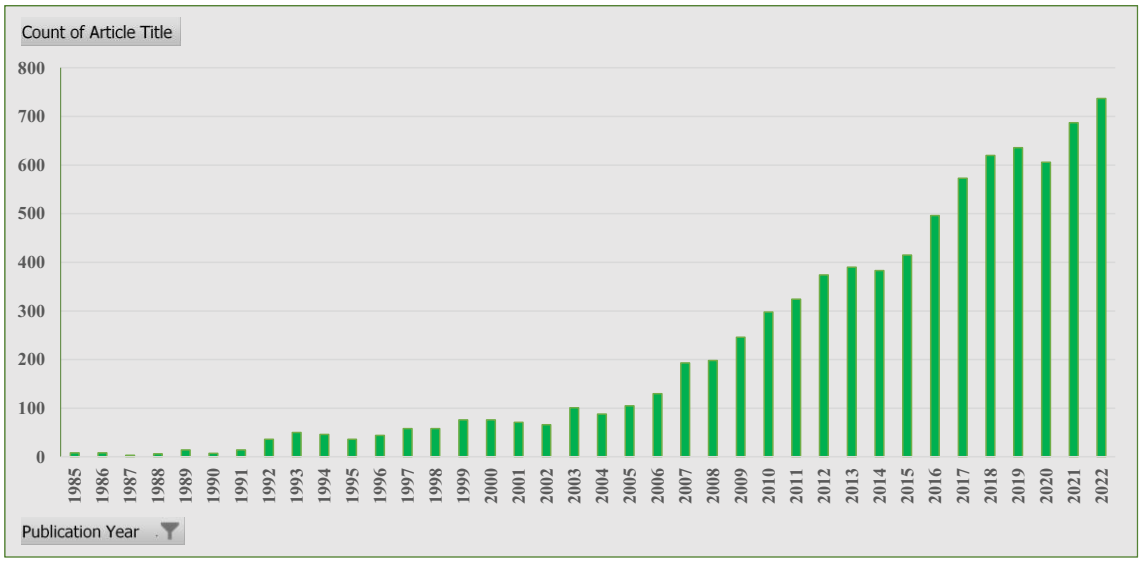
Taking into consideration the data on new issuances of residence permits, we can have a complete picture of the data on entry flows; with reference to the three-year period 2016-2019, after an initial increase recorded between 2016-2017, the entry was characterized by a sharp contraction until the end of the entire period under observation. From the point of view of the issuance of permits, 12% of the total was delivered to citizens of Albanian nationality, followed by Moroccan citizens, with 9.0%. The data on the distribution by gender does not show significant changes, while what is interesting is the percentage difference between the reasons for issuance: 56.9% had as a motivation the family, to the detriment of 6.4% represented by the issuance for work reasons. In absolute terms, with regard to the territorial distribution of the permits issued, Lombardy is in first place among the regions in which more permits were issued (45,000, 25.5% of the total permits), followed by Veneto and Emilia-Romagna. Finally, with reference to the duration of the document, Latium, Basilicata and Veneto are among the regions with an incidence of more than 50% for permits with a duration of more than 12 months.

2. The two-way relationship between determinants and effects of migration: a literature review

Migration is a complex phenomenon that has significant economic implications both in countries of origin of flows and in countries of destination. The effects of migration affect various sectors, including labor market, welfare, taxation and FDI market. At the same time, migration is influenced itself by the characteristics of the countries of origin and destination of the flows. Indeed, the causes of migration lie often in the differences between the labor markets of these countries, or between other country-specific features such as welfare and taxation or amenities.

I will take the labor market as an example. The two-way relationship between migration and labor market has constantly drawn an increasing attention in the literature as it can be seen in Figure 34. Discussing on how labor market affects migration means examining the role of labor market conditions in motivating individuals to migrate. In this case, labor market conditions – such as unemployment rates, wages, and job opportunities – are seen as push or pull factors that drive individuals to seek better economic opportunities in other regions or countries. For example, if a region experiences a high unemployment rate, individuals may be more likely to migrate to areas with lower unemployment rates and more job opportunities. On the other hand, examining how migration affects the labor market means exploring the impact of migrant inflows on the origin or host country's labor market outcomes. Migration can affect labor market outcomes in several ways, including changing the supply and demand of labor, affecting wages and employment opportunities for both immigrants and native-born workers, and potentially leading to changes in industry composition and skill requirements.

Figure 34 – Economic Research on Migration-Labor Market Relationship (1985 – 2023)



Source: Economics Journal articles from Web of Science™ core collection.[24]

Understanding the two-way relationship between migration and the characteristics of countries of origin and destination is important to better address the issues that are often at the center of political-economic debate related to migration and to find more effective responses geared toward maximizing the overall welfare of migrants and natives. The objective of this survey is to investigate this bidirectional link between migration and the characteristics of destination countries, with a focus on the labor market. My goal is to understand how the characteristics of destination countries – including those characteristics directly dependent on the presence of an influx of migrants – affect new migrants' decision to migrate.

The choice to exclude from the survey the literature on the effects in the country of origin of flows threefold. First, although the economic literature has also extensively analyzed effects on countries of origin, a larger number of contributions focus on effects on countries of destination of migration flows[25]. Second, theories explaining the determinants of the decision to migrate (causes) are more focused on what happens in the destination countries and thus are better suited to the analysis conducted here, which is not limited to considering the effects of migration but is aimed at examining the two-way

24 To construct the graph, I did an advanced search on *Web of Science™*. I looked for all papers that had the words *migra* and another labor market- related term. I looked for the words in the category "topic". I found 8322 papers and created the graph by breaking them down by year of publication. I excluded 45 papers from the total because they were published in 2023.

25 See *Economics Journal articles from Web of Science™ core collection.*

link between causes and consequences. Three, the choice is consistent with the study conducted in chapter 3, which concerns the effects of migration on sub-Saharan immigrants in the destination country (Italy).

Moreover, the choice to focus the analysis mainly, although not exclusively, on the labor market is due as well to several considerations, including: (*i*) as highlighted in chapter I, nearly two-thirds (169 million) of the total migrants (272 million) in 2019 were workers; (*ii*) differentials between the labor market of countries of origin and destination of flows represent one of the most important determinants of the decision to migrate; (*iii*) the mechanisms affecting the labor market have been analyzed by a huge number of contributions in migration economic literature; *iv*) the choice is consistent with the study conducted in Chapter 3, which examines the positioning of sub-Saharan immigrants in the Italian labor market.

The survey is organized as follows. Section 2.1 provides an overview of the theoretical framework of the main economic theories designed to explain migration, with a focus on the causal link between the characteristics of the destination country and the decision to migrate. I have focused first on contributions that explain migration through labor market-related variables, and then give a nod to other theories that do not rely on labor market-related variables. Section 2.2 describes the effects of migration on natives in the destination country, in a range of markets including the labor market and the FDI market, and on natives' attitudes towards migrants. Section 2.3 provides an overview of the theoretical framework and the evidence relating to the effect of migration on migrants in the destination country. Section 2.4 briefly describes my conclusions.

Through this review I will try to answer a specific question. The premise is as follows: let t_{-1} be the time at which the individual decides to emigrate, t_0 the time at which the individual emigrates, and t_1 the time at which the effects of his migration to the destination country have unfolded. Numerous studies explain the decision to emigrate (t_{-1}) – that is, the cause of migration – through an investigation on the effects of migration (t_1) – that is, the consequence of migration: the potential migrant decides to migrate because he or she knows the effects of migration. These effects unfold in a varied manner and affect either natives, migrants, or the country as a whole. The question I hope to answer is: according to the economic literature, which effects "weigh" more heavily on the decision to migrate,

i.e., on the cause of migration? The effects on natives, the effects on migrants, or the overall effects?

2.1. Determinants of migration: a conceptual framework

Most of the different determinants of the decision to migrate have in common the existence of differentials between sending and receiving countries. These differentials depend on the differences in demand and supply of various "goods", such as labor force, natural resources or amenities, institutional factors and so on. An overview of the literature on migration economics suggests to classify determinants of the decision to migrate in four dimensions, representing the pros and cons – due to differentials – of the overall economic-social-cultural-political situation in both countries of origin and arrival: 1) push factors (negative aspects of the country of origin); 2) stay factors (positive aspects of country of origin); 3) pull factors (positive factors of country of arrival) and 4) stay away factors (negative aspects of country of arrival). Moreover, travelling costs and formal entry/exit barriers also affect the decision. From a formal and logical perspective, we can argue that, as for each economically rational decision, the choice to migrate or to stay reflects the solution that maximizes the agent's welfare, which in turn depends on which of the above-mentioned aspects prevail: if push and pull factors are stronger than stay and stay away factors, the agent will decide to emigrate and vice versa. Bodvarsson and Van der Berg (2013) identified 3 clusters of theories explaining migrants' decision to migrate: 1) theories based on the migrant as a worker whose decision to migrate is a factor supply decision. The question this migrant asks to himself is "where does my work is better remunerated/requested than in my own country?"; 2) theories considering the migrant as a consumer and his decision as a consumption decision. His question will be "where would I find better goods and services than the ones I can find in my own country?"; 3) theories considering the migrant as a family or household component and his decision as a decision to relocate household production or maximize the overall utility of the family rather than his individual utility. The question in this case would be "where can I find better conditions for my entire family to live than in my own country?".

Research has been developed on many – perhaps all – of these push and pull factors. While neoclassical theories focus on differentials in employment conditions – thus focusing on the labor market perspective – "the 'new economics of migration' considers conditions in a variety of markets" viewing the decision to migrate as a household

decision rather than an individual choice (Massey *et al.*, 1993, p. 432). Moreover, other theories consider differentials in the countries' availability of amenities and public goods.

2.1.1. Early migration theories

One of the first aspects of the labor market to be studied within the economic literature on migration is the wage differential between different places. The earliest studies date back to the late 18th century and analyzed the wage gap between the (city or) country of origin and the (city or) country of arrival as a determinant of the decision of migrating (Smith, 1776; Ravenstein, 1989; Hicks, 1932; Harris and Todaro, 1970; Massey *et al.*, 1993). Smith (1776) noted that there were differences in labor remuneration between the city and more distant areas. He wrote that "(…) the wages of labour in a great town and its neighborhood are frequently a fourth or a fifth part, twenty or five-and-twenty per cent higher than at a few miles distance". [26] Hicks, in turn, wrote 150 years later (1932) that "(...) differences in net economic advantages, chiefly differences in wages, are the main causes of migration".

Extensions of this strand of research include contributions by British geographer Ravenstein (1889), American economist Jerome (1926) and American sociologist Zipf (1946), who focused on the role of geographic distances in explaining migration. Ravenstein (1889) hypothesized seven "laws" of migration, which Greenwood (1997) summarizes as follows: (1) most immigrants move only short distances and usually to large cities; (2) rapidly growing cities tend to be populated by immigrants from nearby rural areas, and gaps created in the rural population generate migration from more distant areas; (3) out-migration is inversely related to immigration; (4) a large wave of migration will generate a counter-wave of compensation; (5) those who migrate long distances tend to move to large cities; (6) rural people are more likely to migrate than urban people; and (7) women are more likely to migrate than men. In turn, based on some of Ravenstein's "laws" (and probably Newton's law of gravity) Zipf (1946) introduced elements relating to the size of migration flows, hypothesizing that the volume of migration between two places is directly proportional to the product of the source and destination populations and inversely proportional to the distance between the two places. In this view, distance is thus considered a good indicator of the costs of migration, while population size

26 See Smith, A. "An Inquiry into the Nature and Causes of the Wealth of Nations" (1776 [1976], Part I, pp. 83–84).

proportionally affects the volume of migration. Finally, according to Jerome (1926), there is a strong correlation between cyclical changes in employment and cyclical changes in immigration and emigration; in addition, consistently with the two-way relationship highlighted in the beginning of this section, emigration would respond to changes in employment conditions, but could also contribute to unemployment.

The wage difference between two countries has been considered as the "first" determinant of the decision to migrate to the places where higher wage is paid. Later, the analysis has been deepened and Economists have developed models that explain more thoroughly the effects of immigration on wages in the destination country and on other aspects of the labor market.

In general, most of the studies on migration conducted in the 20th century developed models characterized by 3 elements: 1) workers from both origin and destination countries are homogeneous and compete for the same jobs; 2) immigration determines an increase in the labor force of the destination countries; 3) labor demand is downward-sloping due to the complementarity between labor and physical capital. Since everything else is kept fixed, these analyses offer "a 'partial' view of the labor market" (Peri, 2016, p. 6). Workers move to place where higher wage are paid, in a market disequilibrium view according to which movements of labor depend on differences in the relative amount of labor existing among countries (Shields and Shields, 1989). To choose whether to migrate or stay in his or her country of origin, a potential migrant calculates the value of the opportunity available in the market in each alternative destination compared to the value of the opportunity available in the market in the country of origin, subtracts the costs of travel (which were assumed to be proportional to the distance of migration), and chooses the destination that maximizes the present value of lifetime earnings.

2.1.2. Labor market competition theory

In preparation for this examination of studies and models of migration, I introduce here the labor market model of immigration that many Economists have used to explain and analyze immigration. The standard economic model of migration is a theoretical framework used to explain why people move from one location to another. This model is based on several assumptions and definitions: *i*) utility maximization (individuals make decisions that maximize their utility, or their satisfaction, by weighing the costs and benefits of moving to a new location and decide whether or not to migrate); *ii*) perfect

information (individuals have access to perfect information about the costs and benefits of migration); *iii*) homogeneous individuals (all individuals are identical in terms of their skills, preferences, and other characteristics); *iv*) competitive labor markets (there are no barriers to market entry or exit); *v*) perfect mobility (individuals can move freely between locations, with no barriers to migration).

The model is a basic labor market model with two countries (or cities), *A* and *B*, who differ for wage level (*wa* > *wb*). According to the model, workers will go from *B* to *A* to increase their income. This movement will increase the labor supply in *A* and decrease the labor supply in *B* in the same quantity; consequently, *wa* will decrease while *wb* will increase. Workers of *B* (both emigrated and not) will gain because of an increasing in their wage, while workers of *A* will lose because of a decreasing in wage compared to the *ex-ante* situation. To understand the net effect both in each country and the whole world, all the gains and losses related to the three factors of production, labor, capital and land should be considered.

This basic labor market model works to give a general and very simple explanation of some dynamics concerning the supply factors of migration. However, it shows some limitations. First, by assuming that the capital is fixed, it considers only the short run; second, it assumes that individuals migrate to maximize their utility, represented only by net income, and does not include other variables that influence the decision to migrate; third, it does not consider other effects resulting from the inflow of immigrants.

The assumption that the capital is fixed seems not realistic (Ottaviano and Peri, 2012; Lewis and Peri, 2015; Peri, 2016). From a theoretical point of view, it is important to make a distinction between the impact of immigration on wages in the short run (when immigrants arrive) and the long run (when capital has fully adjusted to their entry) (Edo, 2018). Since lower wages and higher employment increase the return on capital, in the long run firms respond to the increase in the number of workers by accumulating capital. In this case, immigration incentivizes capital accumulation at home or its inflow from abroad. The increase in the capital stock raises labor productivity and thus labor demand, thereby mitigating the initial negative effects on wages induced by the labor supply shock. Thus, an immigration-induced increase in labor supply on the average wage depends on the dynamic response of physical capital accumulation. If capital is perfectly mobile from one country to another, or if firms anticipate immigration by instantly adjusting their

capital stock, the response of capital to immigration-induced wage changes is immediate. The economy simply becomes larger, while the capital-labor ratio and average wage remain the same as before the entry of immigrants.

As it emerges from the theories that extend the model, other aspects need to be taken into consideration. First, other labor-market aspects, beyond wage differentials, should be included in the analysis. Furthermore, it should be considered that when workers move from one country to another, the international relocation of a consumer also occurs at the same time, and this has repercussions on consumption expenditure, which shifts from source countries to destination countries. The shift in consumption spending is therefore also followed by a shift in the demand for labor to meet that increased consumption. In addition, migration has important long-run effects that the model does not analyze. Possible effects relate to the dynamic growth associated with the movement of people, such as the economies of scale introduced by migrants or the innovations and new enterprises to which they may give rise.

Differentials in labor-related features different from wage gap

In order to extend the understanding of migration's determinants, beyond wage differentials, theories analyzed the role played by other labor market-related aspects, such as differentials in employment and job searching. Labor markets that do not function perfectly – that is, which do not show a perfect match between labor demand and supply – may give rise to regional differentials in employment. Imperfections include, for instance, union restrictions on hiring, occupational licensing, political restrictions and discriminations, too high or too low minimum wage – all of them being country or regional-related aspects which artificially affect demand and supply of labor (Shields and Shields, 1989). Differentials in employment opportunities resulting from these imperfections represent another determinant of migrants' decision to migrate. For example, migrants do not (or at least, not only) decide to migrate to a place where higher wage are paid, but to a place where they can get a job *faster than at home*.

In this theoretical context, one of the variables investigated is the probability of finding a job in the destination country, which in the standard model is assumed to be 100% and this represents a weakness since it does not correspond to reality. Among others, Todaro (1969, 1976) and Harris and Todaro (1970) pointed out that this assumption is very unrealistic for cases involving internal rural-to-urban migration in developing countries.

Todaro assumed this probability to be equal to the ratio of new job openings in the modern urban sector to the number of people waiting for work in the traditional urban sector. The number of jobs in the modern sector grows as industrial output increases (net of labor productivity growth in the same sector) and migration from the rural to the urban sector will continue (despite high unemployment) as long as the expected wage in the urban sector, net of migration costs, is equal to the average wage in the rural sector (Bodvarsson and Van der Berg, 2013). Although many models focus on internal migration, they may be applied to international migration, unless institutional factors or barriers make the analogy impossible to be done.

Limitations of the labor market competition theory

The labor market competition theory provides a clear and intuitive explanation of the possible effects of an inflow of migrants on the wages and job opportunities of native workers when natives and migrants compete for the same job. This explanation is grounded in basic economic principles of supply and demand and is supported by empirical evidence from a range of countries and contexts. The theory has been influential in shaping policy debates around immigration and has led to calls for restrictions on low-skilled migration in order to protect the economic interests of native-born workers. Moreover, the theory has also led to important research on the labor market effects of migration and has helped to highlight the importance of considering the characteristics of both migrants and native-born workers when analyzing these effects.

It notwithstanding, the theory can be overly simplistic, and may not fully capture the complex and dynamic nature of labor markets. For example, some researchers have argued that the theory does not take into account the potential positive spillover effects of low-skilled migration, such as increased demand for goods and services, which can create new job opportunities for native-born workers. Another limitation of the economic competition theory is that it tends to focus on the short-term labor market effects of migration and may not fully capture the longer-term economic benefits that can arise from migration. For example, some researchers have argued that the skills and knowledge that migrants bring with them can contribute to innovation and economic growth in the destination country, which can ultimately benefit native-born workers. Finally, some critics of the economic competition theory argue that it can be used to justify

discriminatory policies against migrants and may overlook the social and cultural contributions that migrants can make to their host societies.

2.1.3. Human capital theory

The human capital theory of migration extends the standard model of migration by including the idea that migrants' decisions to move are also influenced by their education, skills, and other forms of human capital. According to this theory, migration is seen as a strategy to improve one's economic prospects by investing in human capital in a different location. This view of migration draws on Becker (1975) and hypothesizes that individuals migrate to increase their earnings potential by acquiring skills and knowledge that are in high demand in the destination country. In this way, migration is viewed as a rational choice made by individuals who seek to maximize their income.

In the context of migration, human capital theory suggests that *i*) migrants' skills, education, and training can influence their ability to find employment, earn higher wages, and advance in their careers in the host country; *ii*) difference in the distribution of skills and education among natives and migrants may avoid, lowered or increase the competition between them in the labor market; *iii*) migration can lead to an increase in human capital accumulation, which can improve labor market outcomes for both immigrants and domestic workers. Indeed, when immigrants have higher levels of education and skills than domestic workers, they may bring new ideas and innovation to the labor market, leading to a more diverse and productive workforce, which can improve overall labor market outcomes.

One of the first authors who considered migration as an investment is Sjaastad (1962), who argued that a potential migrant compares the opportunity available in the market at each alternative destination against the opportunity available in the market in the country of origin, subtracts the costs of travel (assumed proportional to migration distance), and chooses the destination that maximizes the present value of lifetime earnings. This framework is, in fact, an intertemporal version of the simple standard labor market model, in which would-be migrants respond to wage differences between labor markets in different geographic locations. Sjaadstad uses distance as a proxy for migration costs. The decision to migrate also depends on the information available on job vacancies. Such information is both informal (provided by friends and relatives, for example) and formal. and relatives, for example) and formal (ads in job agency publications).

The human capital theory of migration has been extended and refined by numerous scholars over the years. Borjas's 1987 considers the decision to migrate as the result of both the difference in labor returns in countries of origin and destination and the distribution of human capital among workers of the two countries. That is, a would-be migrant will base his decision on how workers with his similar human capital – skills, education level, experience – are paid in the destination country. In the model, differences in labor returns are not dependent on skills distribution, that is assumed to be the same in the two countries, but on variations in political and economic conditions between the two countries at the time of migration. Borjas notes that in order for a destination country to attract the most able and ambitious workers from abroad, two conditions should be satisfied: 1) there is a strong positive correlation between the earnings of the potential migrant in the home country and in the destination country; 2) there is a more unequal income distribution in the destination country than in the home country. Indeed, if income distribution in the country of origin is better than the income distribution in the country of destination, and if the first condition is satisfied, low-income earners will be the most attracted. Moreover, according to the model, when two countries are similar for labor markets, industrial development, tax income rates, institution etc., there will be a greater possibility of skill transferability across border.

Extensions of Borjas model include other variables, such as non-pecuniary costs of migrating (Clark, Hatton and Williamson, 2007). These costs are: *i*) individual-specific migrating costs, which will increase or decrease according to individual preferences (e.g. preference for amenities available in the destination country) or individual situation (e.g. persecution in the source country or family reunion in the destination); *ii*) direct costs, linked to geographical distance; *iii*) costs deriving from quantitative restrictions on immigration, which will decrease as restrictions decrease; *iv*) costs deriving from "skill-selective" immigration policies, which will decrease the more the migrants are skilled.

Some authors point out that the influence of immigrants can bring about changes in the physiognomy of the destination country's economy and the composition of production technology, according to the specific skill level of the migrants relative to the skill levels of native workers. Peri and Sparber (2009) argue that because production combines different job skills, immigrants with low levels of education have a comparative advantage in manual and physical tasks, while natives with similar levels of education have a comparative advantage in communication - and language-intensive tasks. Native

and foreign workers specialize accordingly, so when immigration generates a large increase in the supply of manual tasks, the relative compensation paid to communication skills increases. This induces natives to progressively shift to language-intensive jobs. This specialization of immigrants and natives in manual-intensive and communication-intensive tasks, respectively (in which each group has a comparative advantage), may also explain at least partially the association between immigration and total factor productivity growth (Peri, 2012). Acemoglu (1998) argues that even if there were no change in relative wages, an increase in the supply of a factor of production could induce firms to adopt technologies that make greater use of the factor whose relative supply has increased. Thus, in the case of an influx of skilled migrants, firms may substitute technologies that are unskilled labor-intensive, which are likely to be less advanced. Lewis (2004) found, for example, that the 1980 "Mariel Boatlift," which brought about 125,000 relatively low-skilled Cubans to Miami, induced local employers to adopt unskilled labor-intensive technologies. Evidence from 1988-1993 shows that manufacturers in cities where the supply of low-skilled labor grew fastest adopted automation technologies at a slower pace.

Further extensions include migrant's income relate to the income of his reference group, assumed to be similar persons in his source country. According to these field of research, focused on the concept of relative deprivation (Runciman 1996), people decide to migrate in order to change their income relative to their peers in the reference group (Katz and Stark 1986). According to Pickles and Rogerson (1984) and McCall (1987) the decision to migrate is made by comparing wage in the country of origin to a specific wage offer in the destination country: if foreign wage plus migrating costs exceeds wage in the country of origin, the migrant decides to migrate. It follows that the more the wage at home is higher, the more the agent will wait for a good foreign wage offer. In this case, the time is included in the model, and it is used also to explain why, empirically, migration does not respond immediately and completely to wage differentials. Uncertainty is also a factor involved in the decision to migrate, that has been identified by economists (Harris and Todaro 1970).

Limitations of the labor market competition theory

The human capital theory provides support for the idea that human capital can be an important factor in determining migrants' labor market outcomes. For example, studies

have found that migrants who have higher levels of education and training are more likely to find employment, earn higher wages, and experience better working conditions than those with lower levels of education and training. Additionally, migrants who are able to transfer their skills and qualifications from their home country to the host country may be more successful in finding employment and advancing in their careers.

However, it is important to note that the relationship between human capital and migrants' labor market outcomes is not always straightforward. For example, migrants may face barriers to accessing education and training in the host country due to language barriers, discrimination, or other factors. Additionally, the value of migrants' education and training may not always be recognized or fully utilized in the host country's labor market, which can limit their opportunities for advancement.

The human capital theory has been subject to several criticisms and limitations. First, it ignores non-economic factors such as cultural and social ties, because it assumes that individuals make migration decisions solely based on economic considerations. Second, the theory assumes perfect information about the labor market conditions in both the origin and destination countries. Third, it ignores institutional barriers and assumes that individuals can move freely across borders to access better labor market opportunities. Fourth, it ignores the impact of discrimination based on factors such as race, ethnicity, or gender which may limit the labor market outcomes of migrants with similar human capital levels. Finally, by assuming that labor market outcomes are determined solely by an individual's human capital, it ignores the impact of macroeconomic factors such as economic growth, inflation, and unemployment rates which may also influence labor market outcomes.

2.1.4. Non labor market-related theories on migration

Theories based purely on labor market-related differentials do not seem to be able to explain certain aspects of reality, such as downgrading of migrants' working conditions or the decision of migrant workers' family members to migrate even if it means losing their jobs. Therefore, a strand of literature studied the determinants of migration not directly correlated to labor market.

Public good and amenities

A group of these theories consider the individual as a consumer of amenities or public goods rather than a supplier of work. Indeed, other reasons for which people decide to migrate include country-specific climate features, family reunion, availability of specific goods or services, cultural and religious matters etc. Therefore, many authors focused on determinants which differ from income maximization. According to this perspective, people would move towards places where they can find goods which do not exist in the place of origin. Such kind of goods are named "amenities" and include climate, scenarios etc. (Bodvarsson and Van der Berg, 2013). Models focusing on the migrant as consumer are called equilibrium models, in contrast with disequilibrium models based on migrant as labor supplier. This is due to the assumption that, being demand the determinant, markets adjust instantaneously once people migrate: wage decrease and rent of land increase in the place of arrival and vice versa in the place of origin. In disequilibrium models, in contrast, labor adjusts in a gradual manner to wage differentials (Bodvarsson and Van der Berg, 2013).

Due to some barriers such as regulations and travelling costs, equilibrium models have been used to explain internal migration in developed countries and seem to be not very fitting to explain migration between developing countries or international migration in general. It notwithstanding, differences in amenities and public goods should be considered as determinants of the decision to migrate in some cases. This is confirmed by the fact that many developed receiving countries are rich of differentiated set of public goods and amenities.

Family and social ties

Moreover, theories analyzed how family ties are important to explain migration. Most migration models investigate the decision to migrate as an individual decision. However, this decision affects not only individuals but also their families. A field of research, therefore, identified this decision as a choice made to increase the welfare of the whole family, considered as a unit. These models investigated other factors affecting the decision of migrating, such as past migration that is represented by family and friends already living in the country of arrival (kinship network) and network of people similar for ethnic, culture or religion (migrant network) (Massey and Garcia Espana 1987). According to these models, costs of migration – such as finding an occupation, rising

stress, finding accommodation - decrease thanks to networks so are endogenous to the dimension of past migration.

Some models explain migration of the entire family as a unit - when the moving brings losses for some members and gains for some others - by taking into account the net gains (e.g., income increase of the husband exceeds income decrease of the wife) (Mincer 1978). With a larger family size and an older nuclear or extended family structure, the family unit is in a better structural position to develop strategies for some members to migrate. The decision to migrate is seen as a way to maximizing the family utility through risk sharing (Stark and Levhari 1982, Stark 1984, Katz and Stark 1986). In this case, migration is considered as a portfolio decision: one or more members migrate to ensure risk hedging if labor market in the country of origin get worse. This determinant of migration affects more those countries in which risk-hedging mechanisms such as welfare programs or unemployment insurance are lacking.

Table 8 summarizes theories on the determinants of migration.

Table 8 - Theories on the determinants of migration

Theories	**Papers**	**Determinant**	**Mechanisms at Play**	**Effects**
Early migration theories on labor market-related differentials among regions	Smith, 1776; Ravenstein, 1989; Hicks, 1932; Harris and Todaro, 1970; Corry, 1996; Massey et al., 1993	Wage gap between sending (city or) country and receiving (city or) country	Market disequilibrium view according to which movements of labor depend on differences in the relative amount of labor existing among cities/countries	Wage will decrease in receiving countries and increase in sending countries
Labor market competition theory	Standard model of labor market	Wage (or unemployment rate) gap between sending (city or) country and receiving (city or) country	1) workers from both origin and destination countries are homogeneous and compete for the same jobs; 2) immigration determines an increase in the labor force of the destination countries; 3) labor demand is downward-sloping	Wage (or employment) will decrease in receiving countries and increase in sending countries
	Greenwood, 1997; Shields and Shields, 1989; Todaro (1969, 1976); Harris and Todaro (1970)	Differentials in employment opportunities resulting from labor market imperfections (union restrictions on hiring, occupational licensing, political restrictions and discriminations, too high or too low minimum wage)	Migrants do not (or at least, not only) decide to migrate to a place where higher wage are paid, but to a place where there is higher probability to get a job	
Human capital theory	Sjaastad, 1962; Becker, 1975; Borjas, 1987; Clark, Hatton and Williamson, 2007	Differentials in labor returns in countries of origin and destination and in the distribution of human capital among workers of the two countries	Decision to migrate is a result of both the differentials in labor returns in countries of origin and destination and the distribution of human capital among workers of the two countries	Wage (or employment) will decrease in receiving countries and increase in sending countries, for those sectors where migrant and native workers compete

2.2. Effects of migration on natives in destination countries

The effects of migration on natives in the labor market have been studied extensively in the economic literature, with conflicting findings. The impact on native workers can be both positive and negative, depending on various factors.

On the positive side, migration can lead to an increase in labor market specialization and productivity, as well as an increase in innovation and technological progress. This is because migrants can bring new skills and knowledge to the labor market, which can benefit native workers by creating new job opportunities or by increasing the productivity of existing jobs. In addition, migrants can also contribute to the economy by paying taxes and contributing to social security systems, which can help to support the native population. On the negative side, migration can lead to increased competition for jobs and lower wages for native workers, particularly for those with lower levels of education and skills. This is because migrants may be willing to work for lower wages or in more difficult conditions, which can drive down wages and working conditions for native workers. In addition, if migrants are not well-integrated into the labor market or if there are cultural or linguistic barriers, they may face discrimination and exclusion, which can further exacerbate tensions between native and migrant workers.

2.2.1. Effects of migration on labor market outcomes of native workers

Traditional economic analysis has focused on trying to determine whether the sum of native gains and losses depending on the migrants' arrival is a positive or negative number. Again, the main market in which effects are studied is the labor market. Considering labor in the same way as any other factor of production, it is inferred that the effects of an increase in labor supply in the destination country (resulting from immigration) should be the same as an increase in capital supply. According to the standard model of labor market, the excess supply of labor resulting from immigration would lead to a reduction in wages (or an increase in unemployment). Consistently with this view, Paul Samuelson in 1964 noted that early postwar immigration policies tended to allow only a small share of immigrants, with the effect of keeping wages high. However, evidence from many cross-city studies that have measured the local impact of immigration on native wages differ widely in their results, and in some cases the effect is

considered small (Card 1990; Altonji and Card 1991; Friedberg and Hunt, 1995; Smith and Edmonston 1997; Card and Lewis 2007).

As seen in the previous section, differences in the skill distribution have been introduced in the standard textbook model. One of the most analyzed mechanisms, indeed, is the one concerning the effects of migration on the job performance of natives in the destination country, according to the skill or experience level distribution of migrants and natives. If workers' skills differ solely by educational level, and if the production technology and productivity of each type of work are given, then a large inflow of immigrants with limited schooling should alter the relative scarcity of educational groups, leading to an increase in the wages of highly educated natives and a decrease in the wages of less educated natives (Peri and Sparber, 2009).

Small or great effect on same-skill-level natives' labor market outcomes: evidence

Borjas (2003) assumes that workers with similar levels of education, but different levels of experience, are not perfect substitutes. Groups of workers defined by skills in terms of education level and work experience are identified, and this results in a great deal of variation in the data. In particular, the negative impact of immigration on wages affects only competing native workers, i.e., those in the same group. Thus, within the same group, the standard model works if same-skill-level migrants and natives are considered perfect substitutes. The evidence from Borjas's work shows that the overall effect on natives' wages is negative. Indeed, despite the beneficial cross effects of low-skill (high-skill) immigration on the earnings of high-skill (low-skill) workers, in the specific considered case of a large influx of immigrants, the average native worker's wage was reduced by 3.2 %. In particular, the wage impact varies dramatically across education groups, with an 8.9 % drop for high school dropouts, 4.9 % for college graduates, 2.6 % for high school graduates, and little change for workers with some educational qualifications. However, the analysis does not take into account other dynamics such as the long-term capital adjustments induced by immigration, the role played by capital-skill complementarities, and the possibility that high-skill immigration (e.g., scientists and high-tech workers) is an important driver of endogenous technological change. The same author recognizes that "the adverse wage effects documented in this paper tell only part of the story of how the U.S. economy has responded to the resurgence of large-scale immigration. The interpretation and policy implications of these findings require a more

complete documentation and assessment of the many other consequences, including the potential benefits that immigrants impart on a the host country", Borjas 2003, pp. 1370-1371.

Borjas's analysis of the labor market impact of immigration has stimulated a great deal of research and debate on the topic of immigration and its impact on the US labor market, and his conclusions have been challenged by other economists who argue that the overall impact of immigration on native wages is relatively small. Ottaviano and Peri (2006) conducted a study that showed that the impact of immigration on the wages of native-born workers in the US is modest and that immigrants are not perfect substitutes for native workers. They found that immigrants and natives are complementary in terms of skills and that the inflow of immigrants expands the economy, leading to increased employment opportunities for natives. Cortes (2008) found that immigration has a positive impact on the wages of native workers in the US. He suggested that immigrants and natives have different skills and that immigrants fill the gaps in the labor market, leading to increased productivity and wages for native workers. Card (2009) argued that the effects of immigration on native workers' wages and employment opportunities are small and may even be positive in some cases. He suggested that immigrants and natives have different skills and that immigrants may help to fill labor market gaps and complement the skills of native workers. However, Card also acknowledged that the effects of immigration on native workers may vary depending on factors such as the size and composition of the immigrant population, the level of economic growth, and the degree of labor market flexibility. Moreover, when low-skilled migrants and low-skilled natives are assumed to be perfect substitutes, a shock in the supply of low-skilled immigrants could have a greater effect on the wages of other low-skilled immigrants than low-skilled natives (Ottaviano and Peri, 2006; Cortes, 2008; Card 2009) although it has been found that upon arrival, immigrants may work in jobs or occupations that do not correspond to their observed skills, with a "downgrading" for example in UK (Dustmann, Frattini and Preston, 2013).

Joseph and Card (1991) provide evidence on the labor market outcomes of lower-skilled natives. Starting from a simple theoretical model of local labor markets, the authors show that the effects of immigration can be estimated from correlations between the fraction of immigrants in a city and the employment and wage outcomes of natives. The study shows that there is no evidence that immigrant inflows are associated with large

or systematic effects on the employment or unemployment rates of lower-skilled natives. On the other hand, according to Borjas, Freeman and Katz (1996) and Borjas (2003, 2006), it seems that the reduced effect of immigration on wages appearing in these studies depends on the analysis being limited to the cross-city level. The weak spatial correlations, although often interpreted as showing that immigrants do not lower native wages, is thus considered difficult to interpret. In fact, if labor and capital adjust to migration inflows by moving from one city to another, then the relevant unit of analysis is the whole country and comparisons between cities will fail to find significant effects. Because these flows arbitrage regional wage differences, the wage impact of immigration may perhaps be best measured at the national level.

The use of the national approach, however, has also led to mixed results. For example, Bonin (2005) applies the framework to the German labor market and finds a very weak impact of supply shifts on wage structure. In contrast, Mishra (2007) applies the framework to the Mexican labor market and finds significant positive effects of migration on wages in Mexico. In turn, Bohn and Sanders (2005) use publicly available Canadian data and report weak effects on wages in the Canadian labor market. In contrast, Aydemir and Borjas (2007) apply the approach to Canadian and Mexican census data and find a strong inverse relationship between wages and migration-induced supply shifts. According to Aydemir and Borjas, 2011, "there is a lot of sampling error in the measures of the immigrant supply shift commonly used in the literature, and this sampling error leads to substantial attenuation bias in the estimated wage impact of immigration" (p. 71).

2.2.2. Effects of migration on natives' economic wellbeing

Some studies, in turn, draw attention on effects of migration on natives' wellbeing, for example natives' purchasing power. Migration can affect consumer prices through changes in the supply and demand for goods and services. If migrants increase the demand for certain goods, prices for those goods may rise, reducing natives' purchasing power. On the other hand, if migrants increase the supply of certain goods, prices may fall, increasing natives' purchasing power. Indeed, the net effect of immigration on the purchasing power of natives depends not only on wage effects but also on other factors, such as price effects (Lach, 2007; Cortes, 2008).

If immigration drives down the price of low-skilled labor, this will reduce the price of unskilled labor-intensive goods and services, thereby increasing the welfare of consumers

of these goods. Evidence from Cortes' study, for example, shows that a 10% increase in the share of low-skilled immigrants in the labor force of an average city decreases the price of immigrant-intensive services, such as housekeeping and gardening, by 2%. According to the study, by lowering prices, low-skilled immigration brings positive net benefits to the U.S. economy as a whole but generates a redistribution of purchasing power.

Other studies investigate the role of migration in increasing or reducing housing price (Gonzales and Ortega, 2009; Lin et. al., 2018). Evidence from Spain after the great wave of immigration in the 2000s shows a proportional positive effect of immigration on the housing market, both on prices and quantities (Gonzales and Ortega, 2009). The explanation would be that the growth of the working-age population has boosted foreign-born demand for houses. In addition, rising housing rents also induced an increase in demand for investment purposes. Thus, Spain's housing boom would have been greater than in the United States and other European countries because of larger inflows of immigrants relative to the population. Between 1998 and 2008, indeed, the average Spanish province received an inflow of immigrants equal to about 17 % of its initial working-age population (the net inflow was actually zero in 2009 and 2010). The authors find that, over the entire decade, this influx of population increased house prices and housing stock by at least the same amount and that, overall, immigration was responsible for about 25 % of the increase in house prices and more than 50 % of the increase in housing stock.

Evidence from China shows a positive correlation as well between migration and urban housing prices with an urban housing price risen by 0.31% for an increase of 1% population inflow (Lin et. al., 2018). The positive relation is found also for Iran, where the housing shortage is a problem for all level of household income, but particularly for low-income households (Hatami, Abu Bakar and Nurwati, 2013).

The effects of migration on native exporting companies have been studied as well. On one hand, an increase in migrant labor can lead to lower labor costs, which can improve the competitiveness of exporting companies in the global market. This can result in increased export volume and improved profitability. On the other hand, the influx of migrant labor can also lead to downward pressure on wages for native workers in the same industries. This can reduce the purchasing power of native workers, leading to lower

domestic demand for goods and services, which can in turn harm the exporting companies.

The impact of an immigrant diaspora network has been widely used to discuss the positive correlation between immigration and trade. Greif's (1993) theoretical work argues that through ethnic trade networks, contract violations are reduced even in regions where legal protection may be weak. Greif refers to international trade in the medieval world, when strong ethnic trade networks enabled international trade despite a major moral hazard problem at a time when merchants and principals were separated by distances that took months or even years to overcome. Gould (1994) analyzes the impact of immigrant networks on the market by pointing out that the very fact of being migrants prevents foreign workers from being perfect substitutes for native workers. In his view, one of the most important aspects of international labor flows is the value of the ties immigrants have with their home country, which include knowledge of the country's markets, languages, preferences, and business contacts. Immigration affects trade through two channels: maintaining preferences for home country products and immigrant networks that reduce the costs of trade. Through these channels, immigration reduces the cost of doing business with immigrants' home countries[27]. Girma and Yu (2002) examine the impact of immigration on trade between the UK and 48 trading partners, including former British colonies and those without colonial ties. The evidence shows that immigration significantly increases trade for non-Commonwealth countries but has an insignificant effect for former colonies. This result may be due to the fact that the trade-promoting effects of immigration (contract enforcement, more symmetric information, etc.) are indifferent for former colonies, as these nations already have similarities with the UK (e.g., in the legal system) and significant mutual acquaintance. Since colonial ties have been found in some past studies to be an important determinant of trade and investment, if immigrant networks function in the same way, then they should promote these flows as well (Flandreau, 2006).

In addition to the effects of migration on trade, the effect on FDI is interesting, although here the literature seems to be scarcer. The relative scarcity of studies examining the relationship between migration and FDI is surprising, considering that long-term investment would benefit more from the transaction cost savings and risk reduction

27 Head and Ries (1998) perform a similar study for Canada, finding that a 10% increase in bilateral immigration leads to a 1% (3%) increase in exports (imports).

offered by migrant networks and that if anything, migration should have a stronger effect on long-term investment such as FDI than on trade (Foad, 2011).

Literatures have asked what kind of causality exists between migration and FDI, namely whether the former drives the latter or vice versa. Evidence regarding the determinants of British capital flows between 1870 and 1913 shows that this type of relationship is not entirely new and that one of the major causes regarding the destination of British flows is the presence of British emigrants (Clemens and Williamson, 2000). Javorcik et al. (2011) analyze the relationship between bilateral FDI and immigration between the United States and a wide range of foreign countries. The study shows that immigration from a foreign country to the United States leads to reverse capital outflows to the immigrants' home countries. This would be explained by two reasons. First, consistent with what has been observed for international trade, there is an informational advantage related to the knowledge that immigrants have about their home countries that U.S. investors are able to use. Second, immigrants in the United States can acquire human and physical capital that they can use to make investments in their home countries, capital that they would not have been able to acquire had they not migrated. The growth of the Indian IT sector explained through the acquisition of human and physical capital from Indians who migrated to the United States is consistent with this theory (Saxeenian 2001).

An implicit assumption underlying the theory linking immigrant networks and FDI is that the greatest effect on FDI will occur through skilled immigrants because they are able to bring with them more information and influence. Kugler and Rapoport (2005) examine the differences between skilled and unskilled immigration with respect to FDI in OECD countries. The authors find that the correlation between skilled immigration and FDI from immigrants' home countries is negative in the present but positive in the future. This would happen because, in the short run, increased immigration causes a leveling off of factor prices and reduces some of the incentives for FDI. In the long run, consistent with theories related to migration and trade, the catalytic effect of the presence of immigrants promotes the creation of the trade networks needed to increase FDI. However, the latter aspect of reducing information asymmetries between the country of destination and origin of flows and FDI would also be applicable to unskilled immigration.

Foad (2001) analyzes the relationship between FDI and immigration at the regional level to understand how the regional distribution of immigrants within a country affects

the regional distribution of FDI within the same country. Growth in the relative presence of an immigrant community leads to new FDI from immigrants' countries of origin. The characteristics of local immigrant communities also seem to have an influence on inbound FDI. With the exception of Africa, more educated communities tend to attract more FDI, consistent with previous studies according to which the attractiveness of an immigrant network increases with the skill level of the immigrants in it. Immigrants' years of residence and age in the destination country combine to give a push/pull result. While older immigrants tend to have weaker ties to their home countries (thus weakening the network), they tend to have greater knowledge of market conditions and greater political influence (thus strengthening the flow of information and access to the network).

2.2.3. Effects of migration on natives' attitudes towards migrants

The economic theory on the effects of migration on natives' attitudes towards migrants is relatively limited. However, several studies have examined the relationship between migration and attitudes towards immigrants, with mixed results (Blalock, 1967; Blumer, 1958; Dustmann and Preston, 2007; Facchini and Mayda, 2008; Hainmueller and Hopkins, 2014; Ruist, 2016).

The literature investigates several determinants of these attitudes, spreading from economic to non-economic determinants. One of the very first and intuitive cause of natives' attitudes towards migrants is the macroeconomic situation of the destination country. When a country is in good economic conditions – such as, with low unemployment rate and high GDP per capita level and growth rate – competition for economic resources deriving from an inflow of migrants may be perceived as less negative as it would be if the country were in bad economic conditions. Many studies consider economical determinants of the attitudes towards immigration in the host countries as a result of perceived competition for economic resources such as housing, labor market and welfare state (Blumer, 1958; Blalock, 1967; Ruist, 2016). Indicators these studies commonly use are GDP per capita or unemployment rate in a cross section of countries.

In order to address the heterogeneity of countries, Ruist (2016) considers the impacts of the macroeconomic context by analyzing attitudes variation *within* countries *over time*, rather than by using a cross-national strategy whom results may be biased by omitted differences in countries' socio-economic contexts. This study therefore analyzes 23

European countries in six time periods (biannually 2002 – 2012) with few holes – that is, 127 combinations in total. According to the author, an economic downturn does imply a worsening in natives attitudes toward immigrants in general; at the same time, it seems still difficult to compare the size of the impact on attitudes in countries which differ for level of GDP per capita, dimension of the welfare sector, share of refugee immigration.

Facchini and Mayda (2008) focus on competition for labor and welfare to explain natives' attitudes toward migrants. Considering a two-channels model, they found that a higher competition among highly skilled workers due to an inflow of skilled migrants will decrease skilled natives' wage relatively to low-skilled workers. The same will happen for the low-skilled natives if low-skilled migrants migrate to the destination country. It follows that through the labor channel, natives' attitudes will be negatively correlated towards same skill level flow of migrants. In the welfare state channel, unskilled migration has always a negative effect on the natives' welfare state because it causes a welfare-leakage effect. It notwithstanding, redistribution of the income may happen through the tax mechanism or the benefit mechanism and this would determine the extent to which the native population will benefit or suffer from the skill level of migrants. In the destination country with a tax-mechanism scenario, an inflow of unskilled migration will increase tax rate. Since the share of income destinated to tax are bigger for high-income people, they will suffer more than low-income people, so that attitudes towards migration will be negatively correlated with income level. For the same reason, if migration is skilled, tax rate will decrease in order to keep the benefit fixed and high-income natives will benefit from migration more than low-income natives. In this case, attitudes towards migration will be thus positively correlated with income level. In a benefit mechanism scenario (tax kept fix) a flow of unskilled migrants will increase the number of people entitled to receive the demogrant, reducing the dimension of the demogrant itself. Since demogrant represents a larger fraction of low income comparing to high income, it follows that after migration poors will suffer more. In this case, attitudes towards migration will be positively correlated with income level. On the contrary, if migration is skilled, the demogrant will increase because of an increase in people paying taxes, and low-income level individuals will benefit more than high income level. In this case, attitudes towards migration will be negatively correlated with income level.

A research strand concerning attitudes of natives toward migrants relates to the group threat theory. According to this theory, the larger is the size of immigrants in the host

society, the more natives will perceive immigrants as a threat, thus increasing the social distance from them. This threat can refer to tangible or intangible goods (Stephan and Stephan, 2000; Stephan and Renfro, 2002). Tangible goods or issues include all those goods such as labor, welfare, housing, natural resources, which are often perceived by natives as their prerogatives. The use of these goods made by immigrants is perceived as a threat because it may reduce natives' use of the same goods. Intangible goods threats, in turn, commonly refer to religious, cultural or symbolic issues – which would be in danger because of religious/cultural/symbolic practices of immigrants, incompatible with the prevailing norms of the destination country (Phalet and ter Wal, 2004). According to the theory, the threat may represent a motivation for natives to react with social distance, immigrant derogation and discrimination and intergroup aggression (Green et. al., 1998; Pettigrew, 1998a; Scheepers et. al., 2002; Stephan and Renfro, 2002). A point of interest is recalled by Blumer (1958) who underlines that in relatively large sociospatial contexts political propaganda against immigrants is the major source of perceived group threat instead of the objective size of the immigration population itself. Evidence seems to confirm the theory (Scheepers et. al., 2002; Schluter and Scheeper, 2010) even though it seems to be useful to compare this theory and evidence from theory and evidence related to the intergroup contact theory.

"Intergroup contact" is defined as "face-to-face interaction between members of clearly defined groups" (Pettigrew and Tropp, 2006, p.754). According to intergroup contact theory, the larger is the size of immigrants in the host society, the greater are the opportunities for this kind of contact between members of immigration group and host society group. When some optimal conditions are met, such as support by authorities, equal status between members, intergroup cooperation and common goals (Allport, 1954), intergroup contact may reduce intergroup derogation. Schlueter and Wagner (2008) examine the role of the size of immigrant population using both the group threat theory and the intergroup contact theory by employing a multilevel design comprising individual respondent from a broad number of European regions and find that both theories seem to be confirmed by evidence. In turn, some studies find that the host society is likely to show positive attitudes towards immigrants when individuals from both the groups share common experiences or cultures (Rustenbach 2010). Examples of shared experiences are persecution, discrimination, the status of immigrant etc; different cultures may include religion, languages, history, customs etc. On the opposite, when individuals

belong to different cultures, have different experiences, or speak different languages, it would be more likely to find anti-immigrant attitudes in the host society (Rustenbach 2010). Semyonov et. al (2023) found that the attitudes towards migrants are shaped much more by preferences regarding the ethnic and cultural homogeneity of society than by threat of economic competition.

According to the human capital theory, there would be a positive relation between the education level of natives and their attitudes towards immigrants. This finding is widely accepted and supported by evidence (Rustenbach, 2010; Gang, Rivera-Batiz and Yun, 2002) and the effect of education is recognized to be one of the strongest variables among the other socio-demographic variables (Davidov and Meleuman, 2012; Coenders and Scheepers, 2003; Jackman and Muha, 1984, Kunovich, 2004, Ervasti, 2004). Studies show two different explanations for this positive relation. An "economic" explanation is given by the fact that, on the one hand, more educated people are also high skilled and therefore do not compete with low-skilled immigrants; on the other hand, the inflow of low-skilled immigrants would increase the proportion of low-skilled workers in the host countries, thus increasing wages of high-skilled workers (see Facchini and Mayda, above). A non-economic explanation is that educated people would show a more tolerant and less racial attitude towards different cultures (Rustenbach 2010, Espenshade and Calhoun 1993). According to Hainmuller and Hiscox (2007) the second explanation – and in general non-labor related factors depending on higher level of education – would account for 65 % of the effect of education on pro-immigrant attitudes (Rustenbach, 2010).

It seems that people who do not have interest in politics or feel alienated politically may be more negative towards immigrants because they look for somebody to blame. Moreover, a positive relation may be found between the level of political literacy of individuals and their attitudes towards immigrants (Rustenbach, 2010). As regards the specific political affiliation, a trend in Europe is that far-right-wing parties which support immigration control gained votes and support from a large part of population in France, Italy etc.

From a more general and sociologic perspective, a role in shaping attitudes towards immigrants might be played by human values (Davidov and Meuleman, 2012). Human values are defined by Schwartz as "desirable trans-situational goals, varying in

importance, that serve as guiding principles in the life of a person or other social entity" (Schwartz 1994, p. 21). The same author proposes a theory based on the identification of ten types of human values[28] and postulates dynamic relations between them. According to the theory, these values are placed along two bipolar dimensions: 1) *self-trascendence* vs *self-enhancement* and 2) *openness to change* vs *conservation*. For our scope, *self-trascendence* – which embeds values such as understanding, appreciation, tolerance and protection for the welfare of people and nature– and *conservation* – which emphasizes self-concern of individuals and include appreciation for the stability of the society, respect for the customs and traditions, etc. – are important to understand attitudes towards immigration. Indeed, basing on this theory to identify a relation between values and attitudes towards immigrants, Davidov and Meuleman (2012) found that the effects of *self-trascendence* and *conservation* on the rejection of immigrants are the strongest in standardized terms. In particular, *self-trascendence* would be negatively correlated with the rejection of immigrants whereas *conservation* would be positively correlated with the same variable. From a policy point of view, and consistently with the human capital theory mentioned above, these findings may play an important role through the education system, which may influence the shaping of human values in the early phases of the life people (Davidov and Meleuman, 2012).

Table 9 summarizes papers on the effects of migration on natives in the destination country.

Table 9 - effects of migration on natives in the destination country

Papers	**Effects**	**Mechanisms at Play**
Borjas, 2003, 2006; Borjas, Freeman and Katz, 1996	On labor market outcomes (especially of lower-skilled natives)	The excess of labor supply resulting from immigration leads to a reduction in wages
Joseph and Card, 1991; Ottaviano and Peri, 2006; Cortes, 2008; Card, 2009		The excess supply of labor resulting from immigration does not necessarily lead to a reduction in wages
Borjas (2002)	Labor market outcomes on natives in case of similar levels of education, but different levels of experience	The negative impact of immigration on wages affects only competing native workers
Ottaviano and Peri, 2006; Cortes, 2008; Card 2009; Dustmann, Frattini and Preston, 2013	Labor market outcomes when low-skilled migrants and low-	A shock in the supply of low-skilled immigrants could have a greater effect on the

28 Universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation and self-direction.

Papers	Effects	Mechanisms at Play
	skilled natives are assumed to be perfect substitutes	wages of other low-skilled immigrants than low-skilled natives
Acemoglu, 1998; Lewis, 2004	Production technology	An increase in the supply of a factor of production could induce firms to adopt technologies that make greater use of the factor whose relative supply has increased
Lach, 2007; Cortes, 2008; Gonzales and Ortega, 2009; Lin et. al., 2018; Hatami, Abu Bakar and Nurwati, 2013	Natives' purchasing power, housing price	The net effect of immigration on the purchasing power of natives depends not only on wage effects but also on other factors, such as price effects
Greif's, 1993; Gould, 1994; Girma and Yu, 2002; Flandreau, 2006; Foad, 2011; Clemens and Williamson, 2000; Groznik, 2003; Kim 2006; Aroca and Maloney, 2005; Javorcik et al., 2011; Saxeenian 2001; Kugler and Rapoport, 2005	Trade and FDI	Immigration affects trade through two channels: maintaining preferences for home country products and immigrant networks that reduce the costs of trade.
Facchini and Mayda, 2008; Blalock, 1967; Blumer, 1958; Ruist, 2016; Stephan and Stephan, 2000; Stephan and Renfro, 2002; Phalet and ter Wal, 2004; Scheepers et. al., 2002; Schluter and Scheeper, 2010; Green et. al., 1998; Pettigrew, 1998a; Rustenbach 2010	Effects of migration on natives' attitudes towards migrants	Effects throughout two channels (labor market channel and welfare state channel) depend on the skill composition of native and immigrant population

2.3. Effects of migration on migrants in destination countries

The economic literature on the effects of migration on migrants in destination countries is extensive and covers a wide range of topics. Overall, the literature suggests that migration can have both positive and negative effects on migrants in destination countries. Some of the positive effects include increased earnings and employment opportunities, access to better healthcare and education, and improved social networks. Some of the negative effects include discrimination, social exclusion, and difficulties in accessing certain public services. The labor market outcomes of migrants in destination countries are among the most analyzed effects of migration in the economic literature. In this section I will first briefly review 3 of the theories explaining the labor market outcomes of migrants – human capital, social network and dual labor market theories –

and then present some empirical results related to the positioning of immigrants in the labor market.

2.3.1. Theories explaining the labor market outcomes of migrants

The human capital theory posits that migrants' success in the destination country's labor market is largely determined by their level of human capital, which includes education, skills, and work experience. According to this theory, migrants who have higher levels of education and skills are more likely to experience positive outcomes in the destination country, such as higher wages and better job opportunities. Many studies support this theory. For example, Chiswick and Miller (2010) found that migrants with higher levels of education and work experience tended to earn higher wages than their less-educated counterparts in the United States. Another study by Dustmann, Frattini and Preston (2013) found that migrants who arrived in the United Kingdom with higher levels of education and work experience had better labor market outcomes than those with lower levels of human capital.

Although human capital theory provides useful insights into the effects of migration on migrants' outcomes in labor market, it may not account for other factors, such as the role of discrimination or social networks, and the barriers for migrants to transferring their skills and knowledge to the host country, such as language barriers or lack of recognition of foreign qualifications. Therefore, to gain a more comprehensive understanding of the complex processes involved in migration and its effects on individuals and societies, it should be used in conjunction with other theories concerning other factors such as language skills, social networks, and discrimination can play a role in determining migrants' labor market outcomes[29].

Social capital theory and social network theory pay more attention to the role of social networks, relationships, and connections in shaping migration and its outcomes. These theories assume that social capital, which includes the trust, norms, and obligations that exist within a network or community, plays a crucial role in facilitating migration and enhancing migrants' well-being in the destination country.

[29] Another important area of research is the impact of migration on migrants' mental health and well-being. Studies have found that migrants may experience higher levels of stress and anxiety due to factors such as language barriers, social isolation, and discrimination. However, access to social support and community networks can help to mitigate some of these negative effects.

According to social network theory, migration decisions are influenced by social networks: individuals are more likely to migrate if they have connections to people who have already migrated (Granovetter, 1973). These connections provide information and support that reduce the costs, uncertainty and risks associated with migration (Stark, 1984; Massey et al., 1987). Moreover, once migrants have arrived in their destination country, social networks continue to play a role in their lives by providing social support, information, and job leads, which can facilitate the integration of migrants into the labor market and society (Dustmann and Kirchkamp, 2002). At the same time, social networks can lead to the formation of ethnic enclaves – when migrants from the same origin country settle in the same geographic area – and "niches" – when migrants from the same origin country concentrate in a specific job or industry.

The concept of niche is also of central importance within the dual labor market theory. This theory suggests that the labor market is divided into two segments: a primary segment and a secondary segment (Piore, 1979). The primary segment consists of jobs that are high-paying, stable, and provide opportunities for career advancement. The secondary segment consists of jobs that are low-paying, unstable, and provide limited opportunities for career advancement. This labor market segmentation seems to be created by the demand for cheap labor by employers (Massey et al., 1993) and workers who are unable to find employment in the primary segment may be forced to take jobs in the secondary segment, where they may be more likely to find themselves in certain labor market niches. Furthermore, according to Kalleberg (2011) the dual labor market theory has evolved over time, and there is now a third segment in the labor market – the precarious segment, which is characterized by low wages, job insecurity, and lack of benefits. Migrants seem to be most employed in the secondary or precarious segments of the labor market, which are characterized by low wages, job insecurity, and poor working conditions (Waldinger, 1996).

Table 10 summarizes theories on the effects of migration on migrants in the destination country.

Table 10 - theories on the effects of migration on migrants in the destination country

Theories	**Papers**	**Effects**	**Mechanisms at Play**
Human capital theory	Chiswick and Miller, 2010;	Labor market outcomes	Migrants' success in the destination

Theories	Papers	Effects	Mechanisms at Play
	Dustmann et al., 2013		country's labor market is largely determined by their level of human capital, which includes education, skills, and work experience
Social capital and social network theories	Granovetter, 1973; Dustmann and Kirchkamp, 2002	Mainly – but not only – labor market outcomes	Social networks play a crucial role in migrants' lives by providing social support, information, and job leads; at the same time, social networks can lead to the formation of ethnic enclaves – when migrants from the same origin country settle in the same geographic area – and "niches"
Dual labor market theory and niches	Piore, 1979; Sassen, 1988; Waldinger, 1996Massey et al., 1993; Kalleberg, 2011;	Labor market outcomes	Labor market is divided into two segments: a primary segment and a secondary segment

2.3.2. Migrants' sorting in the labor market: social networks and individual characteristics

One of the most studied consequences of migration is migrants' positioning across labor market in the destination country. The literature concerning workers' sorting across workplaces has identified at least two different kinds of sorting partially explaining niching and the concentration in workplaces: 1) due to social networks, and 2) due to productive, professional or personal characteristics of workers.

According to Waldinger and Lichter (2003), where a "beachhead" is established by initial immigrants – in terms of specific occupations or geographic areas – new immigrants are drawn as well by social networks. Indeed, one of the main explanation of immigrants' positioning (and concentration) in some specific labor sectors is that social networks act as a link between immigrant populations and jobs (Altonji and Card 1991; Waldinger, 1994). It is well known that immigrant women particularly rely on personal connections to secure work (Sassen 1995). Refugees as well tend over time, to locate

close to their compatriots, thereby sorting into networks, enclaves, and ghettos (Stark and Stark, 1991; Borjas, 1998; Parson, Reysenbach and Wahba, 2020).

In order to understand how the social network works, we can refer to a very simple situation, in which a new immigrant ask to a compatriot (or another immigrant) belonging to her/his social network to work in the same firm she/he works for (or owns). Therefore, one of the main determinants of the role of social network in migrants' sorting across labor markets is that within a social network, members share a range of information and knowledge that is not directly and easily accessible to the outsiders to the network. As Hellerstein, McInerney and Neumark (2011, p. 660) noted, "underlying all network models is some form of information imperfection in which networks serve at least partially to mitigate these imperfection".

In turn, social networks may depend on ties, new or pre-existing, usually due to belonging to the same diaspora, or may arise from residential proximity. According to Hellerstein et al. (2008), neighbor has important effects in explaining (social networks and thus) workers' concentration. Using a matched employer-employee dataset they developed, they found that for whites, another worker living in the same tract of land is twice as likely to work in the same establishment as would be expected by chance. According to the studies concerning residential proximity as a driver to explain workers' sorting, an important role seems to be played by the exchange of information among people living closely. Information-based studies and theories investigate the mechanism for which a link between workers and jobs results from the interaction among people outside of work – that is, when an individual uses his/her personal contacts to find a job and/or an employer uses employee referral to find and hire another employee. When this interaction involves people with similar characteristics – for example, nationality – it can lead to segregation in the workplace. Parson, Reysenbach and Wahba (2020) found that the quality of the network affects refugee labor market outcomes more than the size of the network. Refugees belonging to blue-collar networks are more likely to hold blue-collar, more manual and less complex jobs and to improve manual-type skills. One consequence of this is that low-skill networks lock individuals into jobs lower on the occupational ladder, preventing them from moving to more skilled or complex occupations.

Job opportunities found through social networks may also ensure higher earnings (Patel and Vella, 2013) and/or higher-paid occupations (Model, 1993). Åslund, Hensvik and Skansfind (2014) find that the manager's background is important for hiring patterns. Jobs are often filled disproportionately by workers who share a background with the manager who recruits them. These findings are consistent with the racial and ethnic biases in hiring documented in the single-model studies of Bandiera et al. (2009) and Giuliano et al. (2009). Consistently with social network theory, indeed, some studies found that race and ethnicity may drive sorting across workplaces (Hellerstein and Neumark, 2008). Andersson et al. (2014) systematically quantify the relative contributions of worker, employer, and locational characteristics in explaining the extent to which immigrants work with different employers than natives do and found that immigrants are more likely than natives to work with immigrant coworkers (also from different countries). The set of characteristics used by the authors explains the excess probability for immigrants to work with other immigrants, but it does not explain the compatriot concentration observed. According to the authors (p. 2283), "these findings suggest that although immigrants work together partly because they often have similar skill levels and work in similar jobs, unmeasured country-specific factors also play an important role. A natural interpretation of these unmeasured factors is that country-specific social networks are at work".

Productive characteristics of workers – mainly skills and language spoken – are also identified by literature to explain working segregation. A positive correlation between coworkers' skills level is explained either because *i*) the firm requires a specific skill level and/or *ii*) coordination among workers implies that a particular skill – such as a common language – is shared by all workers in the firm. Kremer and Maskin (1996) found a high and rising correlation between coworker skill levels in firms during the 1970s and 1980s in the United States, Britain, and France. Moreover, the specific skills of many immigrants include craft skills and specific competencies, but also more generic attributes such as willingness to work, ability to withstand external conditions, punctuality, work ethic, and resilience. Evidence from the US (Eckstein and Peri, 2018) shows that in the face of the change from a manufacturing-based economy to a service-based economy, immigrants have shown a high degree of versatility and have been able to integrate into new labor sectors. In addition, they have had the ability to introduce new services, for example in the restaurant sector, as is evident if one looks at the ethnic and new fusion

varieties of restaurants in many cities. Mazzolari and Newmark (2012), find that the presence of immigrants largely increases the supply of restaurant variety. It may be that in some sectors immigrants are preferred over native workers because they are willing to accept more onerous working conditions such as longer and less convenient hours or lower wages. Lower labor costs in this case may lead to a reduction in the goods and services produced and thus increase the purchasing power of natives (as shown by the study by Cortés, 2008, above). At the same time, this dynamic could negatively affect immigrants already employed in these sectors, as for them there could be a reduction in wages or a greater likelihood of unemployment.

At the same time, high-skilled immigrants in some cases possess more suitable skills than natives, which are in demand in cognitive- and analytical-intensive fields where there is rapid growth in labor demand. Major examples include the information technology (IT) sector and various science, technology, engineering, and mathematics (STEM) jobs (Hanson and Slaughter 2016). In the US, foreigners have contributed to innovation and productivity growth in science and technology (see Peri, Shih, and Sparber 2015; Kerr and Lincoln 2010).

2.3.3. Migrants' sorting in the labor market: "niches"

Many immigrants concentrate in one occupation, or one segment of employment. These specific labor sectors are called in literature "labor market niches" (Eckstein and Peri, 2018). A specific occupation is considered an "immigrant niche" if within it there is an overrepresentation of immigrants relative to the share of their occupation in the country. It may be the case that for some occupation segments there is a dominance of immigrants in general or of immigrants of a specific ethnicity or country of origin. In addition, it is possible to find immigrant niches where the origin is relative to a specific region or ethnic minorities in the country of origin.

Evidence from the U.S. labor market shows that Indians from the state of Gujarat are highly concentrated in the hotel and motel sector, while Indians from Punjab work primarily as gas station employees (Dhingra 2012) and Armenians from Syria and Persian Jews, dominate specific retail sectors (Eckstein and Peri, 2018). Historical evidence of the Chinese (e.g., Kwong and Miščević 2005; Zai Liang and Bo Zhou) and other groups show that the phenomenon of niching was observable as early as the 1800s and early 1900s and that historically certain jobs were held by certain immigrant groups. Moreover,

accounts of Russian Jews (O'Keefe and Quincey, 2018) show that in the late 1800s a large migrant flow was directed to rural New Jersey and encouraged to take up farming. The authors note that, on the one hand, this caused an increase in unemployment among native workers employed in agriculture or similar occupations, but, on the other hand, the arrival of the immigrants had positive effects on local markets, reducing native out-migration due to new opportunities to sell and work for the new settlers. Peri and Eckstein (2018) focused on the characteristics and dynamics of the labor market niches in which "new immigrants" work, with special emphasis on the formation, perpetuation and, in some cases, transformation and trans nationalization of contemporary niches. As noted by the authors, the success of one group in occupying a niche often excludes outsiders from opportunities. Hamilton, Easley and Dixon (2018) note through census data that the U.S.-born African American community exhibits less niching than foreign-born blacks. In particular, the study shows that African- and Caribbean-born blacks tend to be more concentrated in specific niches than native-born blacks, but that this greater degree of niching does not appear to be a determinant of their wage advantage.

The job placement of migrants in “niches” has effects on their long-term economic and social prospects. Depending on the niche in which the migrant is placed, there will be different opportunities, which may be “flat” (Eckstein and Peri, 2018) and prevent career growth, or articulated in a way that allows the migrant a continuous improvement in employment and earnings. As is the case for most Mexicans and Central Americans in the United States, in Europe (and in Italy), part of the low-skilled migrants (especially of Eastern European and African origin) has been stuck in the low-paid niches of agriculture, housekeeping and construction, where career opportunities are limited.

On the contrary, the most skilled immigrants sometimes find themselves within niches that are distinguished precisely by the skills that characterize their members, to the point of becoming “transnational” (Eckstein and Peri, 2018), as in the case of the information technology, medical science and research, and applied life sciences sectors. In these niches, Indians, Chinese, Israelis and other Asian groups are examples of migrants who have built their careers on the type of niches.

A related and interesting question concerns the evolution of niches with respect to second-generation immigrants. Waldinger (1999) found that in some typical New York niches (e.g. the garment and fashion industry), second-generation immigrants (such as

Italians and Israelis) occupied the top rungs of the industry in which their first-generation compatriots worked, becoming designers and traders within that niche. Other researchers, however, have found that the second generation tends to leave the niche occupied by the first generation and head for occupations that guarantee some economic success. Second-generation Vietnamese, for example, rarely work as manicurists because the job does not offer a stable income, exposes them to toxic chemicals and is poorly paid (Eckstein and Nguyen 2011).

In general, the niche specialization that is created through social networks contributes to an efficient allocation of migrants' skills in the labor market. Migrants can benefit from belonging to a niche if their resources match the niche type, i.e. if it is flat or complex. The niche therefore can be a valuable channel for migrants' integration into the labor market if it produces specialization while ensuring the freedom of competitive forces (Eckstein and Peri, 2018).

2.4. Conclusion

Through this review I tried to answer a specific question: given the two-way relationship between determinants (causes) and effects (consequences) of migration, which effects "weigh" more heavily on the decision to migrate according to the literature? The effects on natives, the effects on migrants, or the overall effects?

I concluded that the decision to migrate is more related to the effects of migration *on migrants* than to the effects on natives or on the whole country of destination. The role of the effects of migration on natives or on the country is much studied in the literature on the effects of migration, but its influence on the decision to migrate is considered little or none. This may be due to several causes. First, as any economic agent, the migrant tends to maximize his or her own individual (or family's) welfare. Therefore, the migrant who decides to migrate does so by considering the effects of migration on his or her own welfare, rather than those on the country (of origin or destination) as a whole. Second, there is a problem of incomplete information especially in the case of low-skill migrants from developing countries: migrants, through their social networks with previously migrated acquaintances, are often only able to reach information related to the relevant social network rather than the country as a whole at t_{-1}. As a result, they do not really have awareness of the effects of migration on natives or on the country as a whole. Finally, in some cases, even the little information that potential migrants can find through their

acquaintances is incomplete or untrue. This would partly explain the decision to migrate even when the move to the destination country results in a downgrading of the migrant's job or well-being.

In light of these considerations, I found that one interesting area for future research could be related at investigating whether, how, and to which extent the effects of migration on natives and on the destination country as a whole influence the decision to migrate. For this reason, in the following chapter I will start by studying the effects of migration on sub-Saharan migrants' labor market outcomes. Indeed, what emerges from this survey of the literature, is that labor market-related aspects still play a crucial role in determining the decision to migrate end remain one of the most studied features in the economic literature on migration.

3. Sub-Saharan migrants in the Italian labor market: the case of Lombardy

3.1. Introduction

The sub-Saharan African immigrant population in Europe is a small group overall, yet subject to discrimination in the labor market (Kogan ,2006; Beauchemin et al. 2010). Economic literature on this topic suggests that sub-Saharan Africans face significant challenges in the labor market of destination countries, including discrimination, lack of recognition of foreign qualifications and skills, language barriers, and cultural differences. Moreover, since the composition of this group often features a majority of men over women, it contributes to the emergence of gendered migration channels (Mazzucato et. al., 2015; Vickstrom and Gonzalez-Ferrer, 2016).

As much as I am aware of this, there are not many studies in the literature that deal specifically with the positioning of immigrants of sub-Saharan origin in the Italian labor market. This is probably due to the absence of data and to the fact that these migrants are often placed in less formalized areas of the labor market, such as undeclared work and illegal hiring. Moreover, at the national level it is difficult to find data on the employment of foreigners in the Italian labor market that is broken down by country of origin (often the distinction is only between Italians and 'foreigners' in general)[30]. On the contrary, this type of data exists in some cases at regional level, as in the case of Lombardy. In this region, the Regional Observatory for Integration and Multi-ethnicity (ORIM) provides correct and precise information on immigration in Lombardy and constitutes a means of territorial planning of policies and promotion of a culture of integration.

The study I intend to conduct here builds on a previous study which relates to Albanian immigrants in Italy (Cela et al., 2021). In that paper, the authors focused on the main factors influencing the labor market outcomes of Albanians in Lombardy (Italy) and the

[30] I made a special request by email to ISTAT for the purpose of obtaining data on the employment of foreigners, broken down by nationality, but I received the following response: "the sample nature of the survey, unfortunately, does not allow for the processing of meaningful data regarding the nationality, by individual state of citizenship, of the foreign employed. It is, however, present the aggregate data regarding the number of employed people by citizenship (Italian or foreign)."

differences in the labor market positioning of Albanian workers between 2001 and 2016, comparing to other migrants. In addition, the study sought to analyze the effect of gender on labor market positioning of Albanian migrants.

Starting from the data collected by ORIM, I developed a study aimed at capturing some aspects of the positioning of the sub-Saharan community in the labor market of Lombardy. The reason why I focused on this particular community is twofold: on the one hand, the very lack of literature on this precise topic prompted me to explore it in order to start a small strand of research on this issue, with a view to a greater future in-depth study on the individual nationalities that make up the sub-Saharan community; secondly, in the last decade Italy has been increasingly involved, even if not constantly, in the flows of people from sub-Saharan countries, also as a transit country, and therefore knowledge of the dynamics affecting these nationalities becomes more important - both for scientific and policy purposes.

In order to expand the knowledge on the positioning of sub-Saharan immigrants in the Italian labor market, I have chosen some aspects that I consider significant for the analysis. Initially, I investigated how the employment status of sub-Saharans differs from that of immigrants of all other nationalities. I then focused on certain characteristics of sub-Saharans – gender and educational level – with the aim of investigating correlations with the employment status of immigrants who possess them. Therefore, one of the questions I asked myself was: is there a correlation between a particular gender or level of education, and better employment performance for sub-Saharan immigrants?

Next, I compared the results of these analyses intertemporally, to see what variations there had been between the employment situation of immigrants before and after the 2008 economic crisis. For this type of analysis, I took some indicators of labor performance - unemployment, irregular employment and employment rates - divided by gender and educational level and compared them both at an inter-subjective level, i.e. between sub-Saharan immigrants and other immigrants, and at an inter-temporal level, i.e. between 2001, which represents the pre-crisis situation, and 2016, which represents the post-crisis situation. In this case, the questions I asked myself are: how did the labor market outcomes of immigrants change after the 2008 crisis? Have the correlations between gender and educational level, on the one hand, and employment status, on the other hand,

remained stable or changed? Has the crisis had similar or different effects on sub-Saharan immigrants compared to other immigrants?

The paper will be developed as follows. Section 3.4.2 provides an overview of the theoretical literature on the labor market outcomes in destination countries and the role plays by educational level and gender. Section 3.4.3 provides an overview of migrants' positioning in the Italian labor market and outlines the specificities of sub-Saharan migration to Italy. Section 3.4.4 describes data and methods. Section 3.4.5 provides the empirical analysis, subdivided into descriptive statistics and multinomial regression analysis. Section 3.4.6 outlines concluding discussion and some policy implications.

3.2. Related literature

As highlighted in chapter II, one of the most studied consequences of migration is migrants' positioning across labor market in the destination country[31]. The placement and integration of immigrants in the labor market are considered crucial to immigrants' inclusion in the receiving society (Tesfai, 2019).

According to human capital theory, migrants' difficulties in achieving similar labor market outcomes compared to natives are largely attributable to differences in education levels and skills (Becker, 1975). The migrants' lack of labor market knowledge plays a role as well (Piracha et al., 2012). Much of the disadvantages in the job performance of women (Azmat et al., 2006), immigrants (Liversage, 2009) and racial minorities (Catanzarite, 2000) stem from a lack of human capital. The difficulty in skill recognition by native employers is often due to the cultural distance between the country of origin and the country of destination or to differences in educational systems and labor market structures. This results in a sorting of migrants to certain tasks and jobs where skill mismatch is less problematic (Dustmann, Fabbri, & Preston, 2005). As a result, migrants tend to be overeducated for the jobs for which they are recruited (Joona, Gupta, & Wadensjö, 2014; Visintin, Tijdens, & van Klaveren, 2015), thus contributing to higher levels of industrial niching and job segregation.

[31] See chapter two "literature review," section 2.3 "Effects of migration on migrants in destination countries", for a more in-depth description of studies that explain the labor market outcome of migrants in destination countries.

The economic literature on niching and dual labor markets has shown that it is common to find over-concentrate immigrants in those jobs that are less attractive to natives (Napierała & Wojtyńska, 2017; Ruiz & Vargas-Silva, 2018). The resulting polarization means that in this segmented or "dual" labor market, natives are overrepresented in jobs with higher wages and higher social security while immigrants are overrepresented in jobs with lower wages and lower social security (Sassen, 1990; Christopher & Leslie, 2015; Halbmeier, 2019). This bias is due to various factors, including mechanisms of discrimination and exclusion, such as ethnic segregation networks and stereotypical thinking of native-born employers (Arrow, 1998; Bursell & Jansson, 2018; Hensvik & Skans, 2016). In addition, immigrants' experiences, skills, and the human capital in general also seem to be worth less for labor market positioning purposes comparing to natives (F. F. & Jansson, 2018; Hensvik & Skans, 2016).

A significant body of economic literature extended the analysis to include the effects of gender on the labor market sorting of migrants. Borjas (1987) found that male immigrants to the US were more likely to be employed in manual labor jobs, while female immigrants were more likely to work in white-collar occupations. This gender-based occupational sorting was driven in part by differences in human capital and language skills between male and female immigrants. On the other hand, other studies found that the gender gap in earnings is larger among immigrants than among native-born workers. This is due in part to differences in the types of jobs that male and female immigrants are able to obtain, with women more likely to work in lower-paying service such as clerical occupations (Antecol and Bedard, 2006) or household and personal service jobs (Constant and Massey, 2003). Dustmann and Glitz (2011) studied the experiences of immigrants to Germany and found that women were more likely to work in part-time jobs, even after controlling for differences in human capital and other factors. The authors argued that this gender-based sorting was due to a combination of demand-side factors (e.g. the availability of part-time jobs) and supply-side factors (e.g. preferences for part-time work among female immigrants).

Overall, it seems that the gender-based sorting is driven by a combination of differences in human capital, preferences, and labor market opportunities. Therefore, policies aimed at reducing discrimination and improving the educational attainment of female immigrants could help to close the gender gap in the labor market performance of

immigrants in destination countries. Recommended policies should also be aimed at supporting work-family balance, such as parental leave and flexible work arrangements, as a way to help female immigrants reconcile work and family responsibilities.

There is limited research that directly compares the employment status of sub-Saharan migrants to those of other nationalities[32]. Agerström, and Rooth, (2011) conducted a field experiment in Sweden to investigate discrimination against job applicants based on their weight and immigrant status and found that sub-Saharan Africans experienced the highest levels of discrimination among all immigrant groups. It notwithstanding, some results can be gleaned from studies that in some way deal with the topic. In general, many of these studies found that Africans had lower rates of labor force participation, higher rates of unemployment, and lower occupational attainment than immigrants from other regions, including Asia and Europe (Bevelander and Pendakur, 2014).

According to literature, the specific context of the destination country is also crucial with regard to migrants' integration. Immigration history and policies of the destination country, as well as natives' attitudes towards migrants, form a context of reception that plays a significant role in determining the labor market outcomes of immigrants. Tesfai (2019) highlights the importance of considering both individual and country-level factors when examining the labor market outcomes of immigrants in different regions. The author found that immigrants from sub-Saharan Africa generally had lower employment rates and earned lower wages than immigrants from North Africa, but the country of destination played a significant role in determining labor market outcomes. Immigrants in France generally had better labor market outcomes than those in Spain, regardless of their region of origin in Africa.

In the following section, therefore, the specific Italian context will be examined, both with regard to the phenomenon of migration and with regard to the labor market positioning of immigrants.

3.3. Sub-Saharan migration to Italy

A large influx of immigrants from African countries has characterized Italy since 2011, mainly (but not exclusively) as a consequence of the "Arab Springs". In 2016, about

[32] See Kogan 2006; Fokkema and de Hass', 2011 and Tesfai, 2019 for a focus on African migration.

180,000 irregular migrants arrived in Italy by sea, some of whom sailed from the North African coast. According to that year's IOM report, these included a large number of sub-Saharan Africans (about 90%), mainly from Nigeria, Mali, Gambia and Senegal. The 2022 IOM report confirms North Africa as a major transit hub and departure point for sub-Saharan African migrants heading to Europe. There are two main routes used by the tens of thousands of sub-Saharans heading to Europe: the Central Mediterranean route (mainly from Libya and Tunisia to Italy) and the Western Mediterranean route (mainly from Morocco and Algeria to Spain). For both routes there has been an increase even in 2020, despite the COVID-19 pandemic. The very high risks of both routes cause many deaths, and in 2020 alone, more than 1,500 migrants from West and North Africa to Spain, Malta, and Italy were reported dead or missing at sea. Most migrants on these routes use transports organized illegally by smugglers to reach and cross North Africa to Europe; those trying to reach Libya from sub-Saharan African countries, for example, are smuggled primarily along two routes, including the Western route (used by West Africans through Niger, Mali, and Algeria) and the Eastern route (used largely by East African migrants through the South).

At the beginning of 2020, the component made up of citizens of African countries in Italy accounted for 30.7% of foreign citizens legally residing in Italy. This component differs within it according to the area of origin: 19.2% from North Africa; 9.7% from West Africa; 1.1% from East Africa; and 0.7% from Central and Southern Africa. Adding up the three areas of West, East and Southern Africa, therefore, yields that about 11.5% of the non-EU population is from sub-Saharan Africa. 54.8% of foreigners from the African continent are under 35 years of age (IOM 2022).

With particular regard to Lombardy, for which more data can be analyzed than for other Italian regions and at the national level thanks to the use of the ORIM Observatory, the immigrant population of sub-Saharan origin is estimated to correspond to about 20.5% of the total immigrant population in 2016. The highest incidence is male (25.4 %) almost 9 %s higher than female (14.5 %). Sub-Saharan immigrants appear to be among the youngest, with an average age of around 33.5 years, compared to the average for other immigrants, which corresponds to about 37 years of age, with peaks exceeding 50 years (such as in the case of non-EU Eastern European women). In both groups, sub-Saharans and other immigrants, the percentage of minors (older than 14 years) is less than 2% while

sub-Saharan over-65s account for 20.5%, compared with 79% of other immigrants. The sub-Saharan immigrant population is thus confirmed as one of the youngest populations.

The presence of irregular foreigners on Italian soil has also inevitably affected the labor market, just as the shape of the labor market has affected migrants' choice to settle in Italy, in a relationship of continuous interdependence. On the one hand, there has been a reduction in the number of natives willing to work in a number of occupational sectors - such as construction, agriculture, and home and personal care services - in which numerous job opportunities for migrants have thus emerged. On the other hand, the presence of an established informal economy has facilitated the entry of many undocumented migrants into the labor market, often exposing them to discrimination and other forms of mistreatment (Cela et. al, 2021) as well as to precarious and economically inadequate working conditions (Fullin and Reyneri, 2011). Precisely these conditions, together with limited access to the welfare system, made, at least until the onset of the crisis in 2008, male migrants less susceptible to unemployment than native males (Fellini & Fullin, 2016; Venturini & Villosio, 2018); at the same time, the aging population together with the progressive tendency of native women to employ themselves in occupational sectors other than home and personal care have caused an increase in female migration to Italy, especially with regard to elderly care and domestic services (Barbiano di Belgiojoso & Ortensi, 2015, 2019).

The labor integration of migrants goes hand in hand with social integration and thus encounters the same barriers – relating mainly to language and cultural differences, as well as to negative native attitudes related to economic and noneconomic prejudices (see Chapter II). In the case of women (and to a lesser extent men) these barriers are compounded by the need to balance work and family care, especially in cases where childcare facilities prove to be overly burdensome (Bonizzoni, 2013). From the point of view of job integration and career opportunities, migrant workers generally experience an initial downgrading of their position in the labor market (Cela et. al., 2021). Most of them also experience substantial employment immobility, as according to some estimates upward mobility mainly concerns skilled migrants who are already integrated into Italian society (about 10 % of total migrants) (Barbiano di Belgiojoso, 2019; Fellini & Guetto, 2019; Cela et. al., 2021).

3.4. Data and methods

As indicated in the introduction, I used data collected by ORIM, the Regional Observatory for Integration and Multiethnicity in Lombardy. In 2001, ORIM initiated a face-to-face survey that was conducted annually in Lombardy with respect to the population of foreign origin (Baio et al., 2011). Despite being geographically limited, the breadth of the immigrant population the survey targets (naturalized, regular and irregular immigrants older than 15 years of age) make the related datasets a very valuable source for migration research in Italy. The survey collects several fixed and benchmark datasets for the foreign-born population and numerous fixed socio-demographic variables, including country of origin and information on household composition, labor market participation and income, as well as an in-depth thematic section that varies each year. The survey is designed using the central sampling method, a probabilistic technique developed to collect representative data from populations with foreign backgrounds, regardless of the "legality" of the individuals' presence (Baio et al., 2011).

For my analysis, I used a pooled data set of 2 cross-sectional surveys relating to the first-year survey period in 2001 and the last year of survey availability, 2016. I terminated the analysis at the latter date because we considered 2016 representative of the medium-term effects of the 2008 economic crisis and because the reduction in the sample size of more recent surveys endangered the comparability with the first wave. The total sample comprised 11.214 migrants, of whom 2.772 were from sub-Saharan countries (24,7%) and 8.437 (75,2%) coming from the other countries of the world (except Italy).

Immigrants of sub-Saharan origin are referred to as part of the group called "sub-Saharans" and include persons of citizenship from the countries listed in the appendix. Persons of all other citizenships except Italian are part of the group referred to as "rest of the world." The absolute number of respondents for each of the two years chosen differs and corresponds to 7.909 respondents in 2001 and 3.301 in 2016. The difference in the size of the total sample does not affect the results of the analysis, as comparisons are made within the same year and only the percentage values are compared intertemporally.

I will test three questions. First, whether it is more likely for people of Sub-Saharan origin to be employed, illegally employed, not employed, or in education, compared to people of a different citizenship. This question will be analyzed in two different

timeframes, that of 2001 and that of 2016. By doing so, the analysis aims at providing some evidence as to the trends in the association between occupational status and citizenship across more than a decade. Secondly, this section will look at the distribution of the occupational status variable and gender amongst people with sub-Saharan citizenship in both 2001 and 2016. The aim of this question is to look at how the gender distribution of occupation status has changed over time. Finally, a third question relates to the relationship between occupation status and education levels amongst people with sub-Saharan citizenship in both 2001 and 2016. This question will explore whether educational achievement pays off in terms of occupation status. The structure of this data analysis section is the following. I will first look at some descriptive statistics concerning the variables in question, detailing what the explanatory and response variables are. I will then present the models used to test the distribution of the variables and the predictions their models yield concerning the association between variables. Given the nature of the dataset and variables, inference will be made from contingency tables, multinomial probit maximum likelihood regression analysis (Model 1 and Model 2) and ordered multinomial logit regression analysis (Model 3).

3.4.1. Descriptive statistics and data analysis

The first question of this analysis is whether employment status varies according to citizenship. Employment status is the explanatory variable, this is coded as a categorical variable that can take 4 group specifications describing whether the respondent is registered in legal employment, in illegal employment, in education, or not in employment. The response variable in this case takes the value of 1 if the respondent is a citizen of a country in sub-Saharan Africa, and 0 otherwise.

In Table 11 and 12 I present the number of observations for each group of the two categorical variables in question displayed in two 2-by-2 contingency tables. The tables report the percentage of citizens in different occupation status for 2001 and 2016. One important difference emerges from the comparison of Tables 11 and 12.

Table 11

Contingency table, model 1, 2001 with row percentages, Chi-squared, and Cramer's V

Citizenship	*Occupational status*				***Total***
	Registered employment	In education	Not employed	Unregistered employment	
Other	3096 55.7 %	106 1.9 %	1159 20.9 %	1193 21.5 %	5554 100 %
Sub-Saharan Africa	1236 62.1 %	40 2 %	312 15.7 %	402 20.2 %	1990 100 %
Total	4332 57.4 %	146 1.9 %	1471 19.5 %	1595 21.1 %	7544 100 %

χ^2=31.789 · df=3 · Cramer's V=0.065 · p=0.000

Table 12

Contingency table, model 1, 2016 with row percentages, Chi-squared, and Cramer's V

Citizenship	*Occupational status*				***Total***
	Registered employment	In education	Not employed	Unregistered employment	
Other	1556 60.1 %	157 6.1 %	639 24.7 %	238 9.2 %	2590 100 %
Sub-Saharan Africa	251 38.1 %	42 6.4 %	271 41.2 %	94 14.3 %	658 100 %
Total	1807 55.6 %	199 6.1 %	910 28 %	332 10.2 %	3248 100 %

χ^2=109.854 · df=3 · Cramer's V=0.184 · p=0.000

While in 2001 it was by far more likely for people from Sub-Saharan Africa to be in registered employment, in 2016 most people from this region were either not in employment or in unregistered employment. Another difference between the groups is visible when comparing Sub-Saharans to people from the rest of the world. In 2001 people from sub-Saharan Africa were about 6.4% more likely to be in registered employment compared to people not from the region. However, in 2016 that number dropped to the point that Sub-Saharans were 22% less likely to be in registered employment compared to people from the rest of the world. Beneath the tables are also some first statistical tests of independence and strength of the relationship (Chi-squared and Cramer's V test). The two variables in question appear to be associated at the 0.05 alpha level. This will be further and more precisely tested in the models below.

Similarly, Tables A1 and A2 (in appendix) are contingency tables of the second question of this analysis, namely whether occupation status is unevenly distributed across genders and across time amongst people with sub-Saharan citizenship. To answer this question only people from sub-Saharan Africa are considered in the analysis. The response variable is gender, which takes the value of male and female. The explanatory variable is occupational status defined as explained for the previous question of this analysis. As for Table 11 and 12, these tables report the Chi-squared test for independence and the Cramer's V test of strength of the association. The trends in this case are very clear. In 2001 men were more likely to be in registered employment by 17.5 % and about 3.5 % more likely to be in unregistered employment compared to women. On the other hand, women are almost 20 % more likely to be unemployed and 1.5 % more likely to be in education. In 2016 there is no statistically significant difference in occupational status across genders, the p-value of the association (0.476) suggest that in 2016 occupational status and gender were independent variables.

Tables B1 and B2 (in appendix) are contingency tables for the third question of the analysis, i.e., how occupation status is distributed across education levels. In this question the explanatory variable is occupational status, while the response variable (education level) is divided in 4 categories (no educational achievement, primary school, secondary school, and tertiary school, i.e., university level education). Here the differences between 2001 and 2016 are more nuanced. In both years people with some levels of education were more employed than people with no education. However, between people who have

primary-level, secondary-level, and tertiary-level education there appears to be no difference in occupational status.

3.4.2. Employment

The following model uses a multinomial probit link to test the distribution of employment status for people of different citizenship.

$$probit[P(Y = 1)] = \alpha + \beta_1(Occupational\ status) + \beta_2(Gender) + \beta_3(Age) + \beta_4(Education\ level) + \epsilon$$

Where (Y=1) occurs when the respondent is from sub-Saharan Africa and (Y=0) occurs otherwise. When looking at the relationship between the response and explanatory variables this model includes several confounders controlling for some socio-economic characteristics of respondents, namely, gender, age, and education level (measured by looking at educational certificates). The age variable is centred in order to allow for more significant statistical inference when the value is at zero (set to the mean). Given the different number of data points for the different years and how time might interreact with the variables used in the analysis, I run two models, one with the 2001 data and one with the 2016 data and I then compare the results to test significant differences in distribution.

Table 13 below reports the risk ratios of the coefficients of the probit model. In both models, the "registered employment" group is set as the reference value of the explanatory variable. For categorical values, the table reports which of the categories in a variable runs the higher risk of occurring when Y is 1 (of sub-Saharan African origin) and not 0. When the risk of an outcome is high compared to the reference value the risk ratio is further away from 1. Vice versa, when the risk of an outcome is lower compared to the reference value the risk ratio falls between 0 and 1. From the results it is possible to infer the following. For people who enjoy citizenship from a country of sub-Saharan Africa, in 2001 the risk of being unemployed or in illegal employment is lower than that of being in registered employment compared to the risk of people not from sub-Saharan Africa. Instead, in 2016 people from sub-Saharan Africa are significantly more likely to be either not employed or in unregistered employment than in registered employment. These results are significant at the alpha 0.05 level notwithstanding the control variables added. Control variables do not differ in their effect between 2001 and 2016. People from

sub-Saharan Africa in the sample are more likely to be male and with low educational achievements compared to people from other parts of the world both in 2001 and in 2016.

Table 13 - The effects of citizenship on occupational status, 2001 and 2016

Model 1. The effects of citizenship on occupational status in 2001 and 2016				
	2001		**2016**	
Coefficient	*Risk Ratios*	*std. Error*	*Risk Ratios*	*std. Error*
(Intercept)	0.61 ***	0.02	0.32 ***	0.02
Age (centred)	1.00	0.00	0.99 ***	0.00
Registered employment	*Reference*		*Reference*	
In education	1.02	0.12	1.00	0.12
Not employed	0.82 ***	0.04	1.69 ***	0.10
Unregistered employment	0.92 *	0.04	1.56 ***	0.13
Male	*Reference*		*Reference*	
Female	0.81 ***	0.03	0.66 ***	0.04
Primary School	*Reference*		*Reference*	
No educational achievement	1.51 ***	0.08	1.74 ***	0.20
Secondary School	0.85 ***	0.03	0.83 **	0.05
Tertiary School	0.86 **	0.05	0.75 **	0.07
Observations	7461		3218	
R^2 Nagelkerke	0.038		0.125	
			** p<0.05 ** p<0.01 *** p<0.001*	

Source: Author's elaboration of ORIM data

Figure 35 and Figure 36 picture the predictions made from the model and described above for 2001 and 2016, respectively.

Figure 35 - 2001

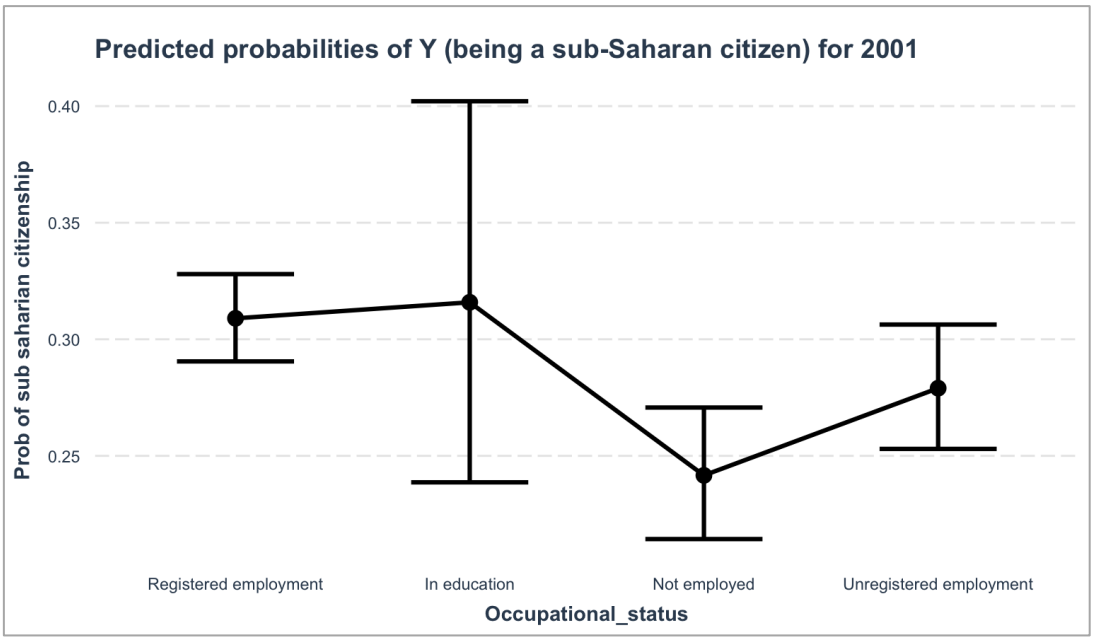
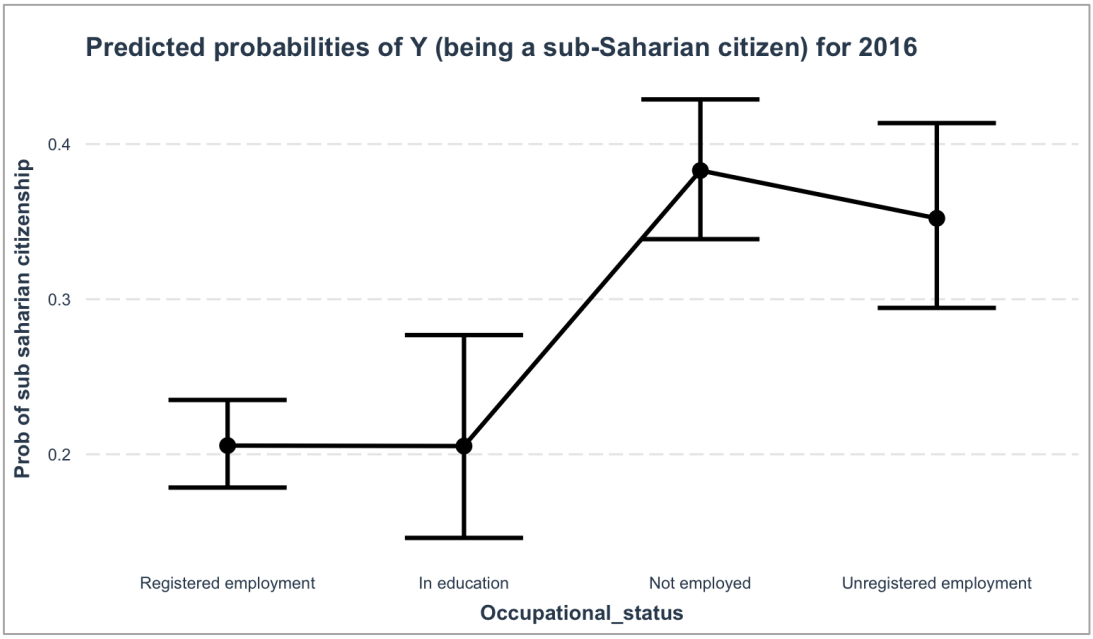


Figure 36 - 2016



Source: Author's elaboration of ORIM data

3.4.3. Gender

The multinomial probit link used to test the question relating to occupation status and gender is the following,

$$probit[P(Y = 1)] = \alpha + \beta_1(Occupational\ status) + \beta_2(Age) + \epsilon$$

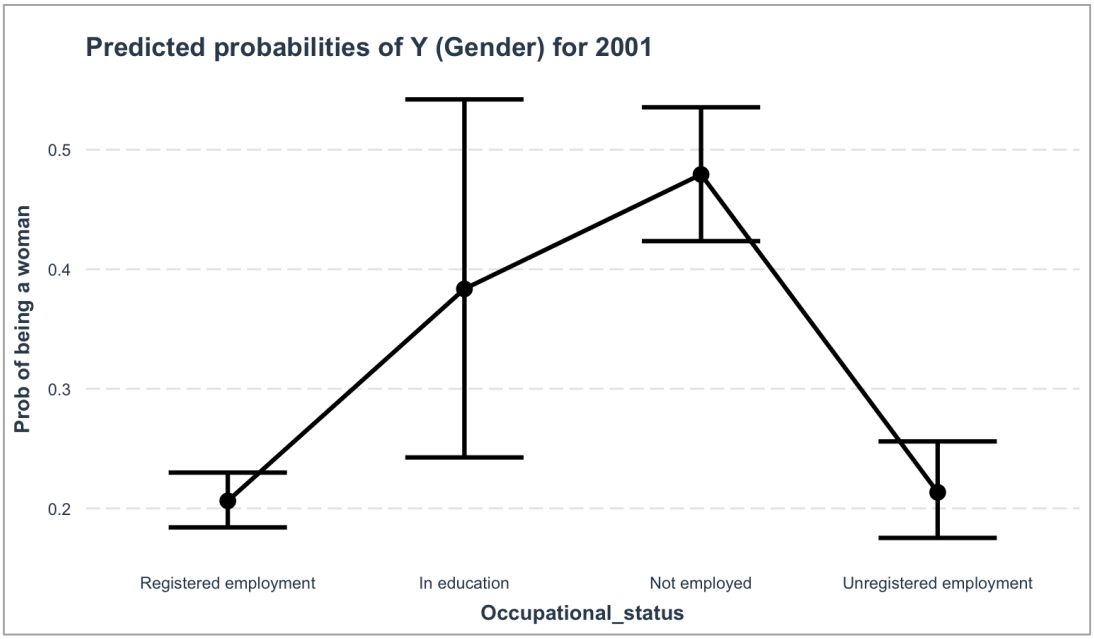
Where (Y = 1) refers to the respondent being female, and (Y = 0) denotes the respondent being male. Table 14 reports the exponentiated regression coefficients. The results of the probit model confirm the intuition from Table A1 and A2. In 2001 there is a significant difference in occupational status for female respondents, women being more likely to be in education and not in employment compared to men. This gender-distinction in occupation status disappears in 2016. In fact, in this model employment differences are not significant. Figure 37 and 38 display predictions made from this model for the average value of age for 2001 and 2016, respectively.

Table 14 – Occupational status vs gender, 2001 and 2016

Model 2. The distribution of occupational status and gender in 2001 and 2016				
	2001		**2016**	
Coefficient	*Risk Ratios*	*std. Error*	*Risk Ratios*	*std. Error*
(Intercept)	0.40 ***	0.02	0.74 *	0.10
Age (centred)	1.01 *	0.00	1.01	0.01
Registered employment	*Reference*		*Reference*	
In education	1.69 *	0.35	0.93	0.23
Not employed	2.15 ***	0.18	1.14	0.13
Unregistered employment	1.03	0.08	0.97	0.16
Observations	1985		653	
R^2 Nagelkerke	0.080		0.010	
			** p<0.05* *** p<0.01* **** p<0.001*	

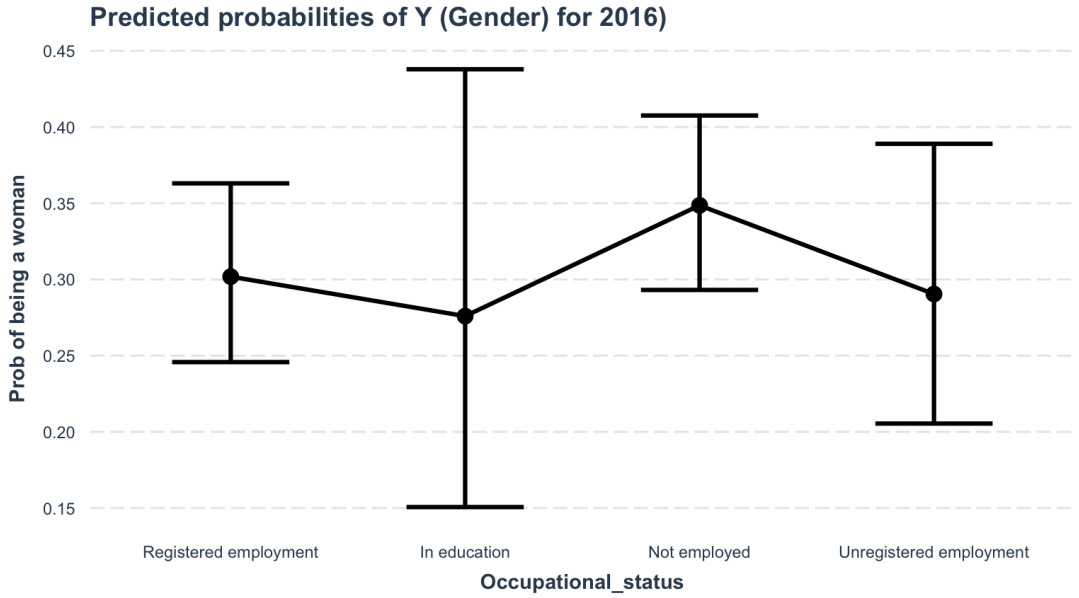
Source: Author's elaboration of ORIM data

Figure 37



Source: Author's elaboration of ORIM data

Figure 38



Source: Author's elaboration of ORIM data

3.4.4. Education

Model 3 looks at the distribution of the occupational status variable over education levels. I construct for this question a multinomial logistic regression model in which the response variable (education levels) is an ordered variable and occupational status, the explanatory variable, takes only three levels (regular employment – the reference value, illegal employment and not in employment). I exclude people currently in education from this analysis as in tables B1 and B2 it emerges students in the Sub-Saharan dataset are too few to attempt statistical inference. Thus, they are excluded from this analysis. The model uses a logit link and is the following,

$$Logit[P(y \leq j)] = \alpha_j - \beta_1(education\ levels)$$

Where j are the various ordered levels of y (no education, primary, secondary, tertiary school). For each category of y (j) the model calculates the odds ratio by dividing $P(y \leq j)$ by $P(y > j)$.

What emerges from this analysis is displayed in table 15. Having a higher education level decreases the odds of being not employed in both years. In 2016 a higher education

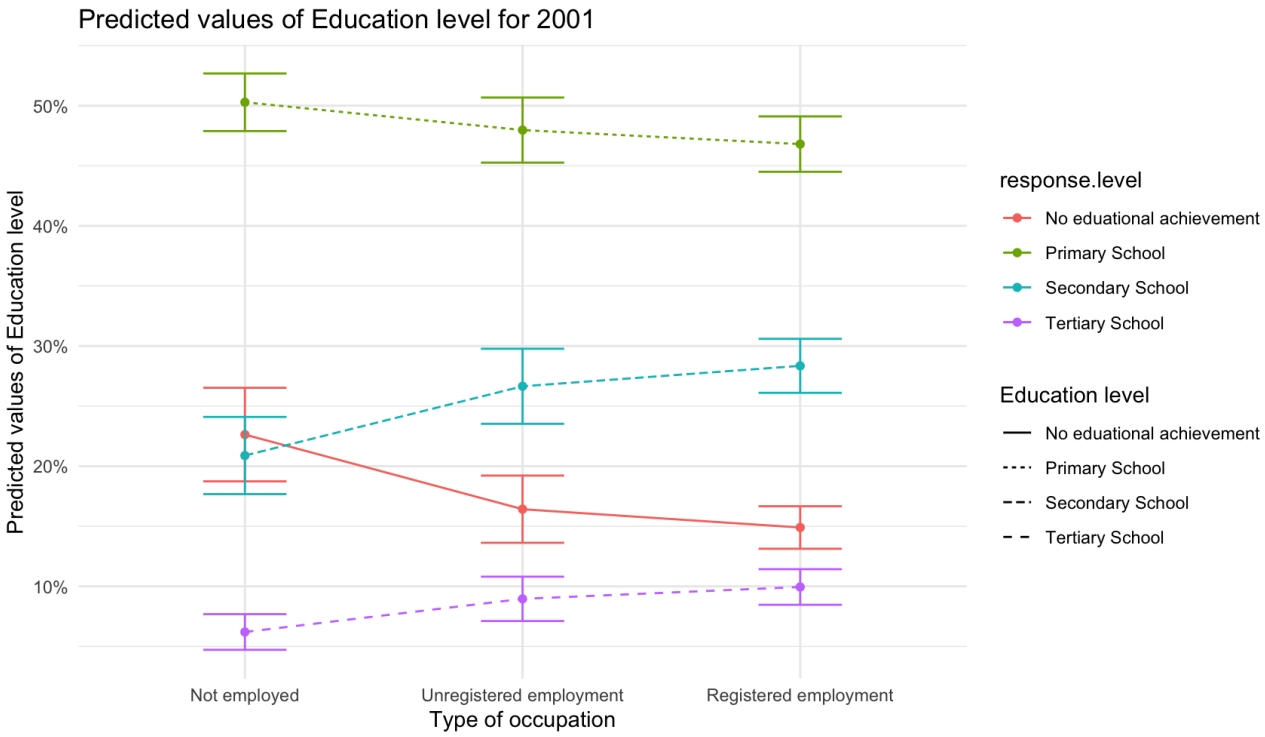
is also negatively associated with unregistered employment. What emerges from this analysis is that people from sub-Saharan Africa both in 2001 and 2016 are more likely to be in registered employment when they have a higher level of education. The difference between employment levels for people with different education appears to strengthen over time between 2001 and 2016. Results are displayed in Figures 39 and 40 for 2001 and 2016, respectively.

Table 15

Model 3, education level and occupational status				
	2001		**2016**	
Coefficient	*Odds Ratios*	*std. Error*	*Odds Ratios*	*std. Error*
Beta coefficients				
Registered employment	*Reference*		*Reference*	
Not employed	0.60 ***	0.07	0.61 **	0.10
Unregistered employment	0.89	0.10	0.59 *	0.14
Intercepts				
No eduational achievement>Primary School	0.18 ***	0.01	0.08 ***	0.01
Primary School>Secondary School	1.61 ***	0.09	1.00	0.12
Secondary School>Tertiary School	9.05 ***	0.76	8.95 ***	1.52
Observations	1923		608	
R^2 Nagelkerke	0.010		0.019	
			** p<0.05 ** p<0.01 *** p<0.001*	

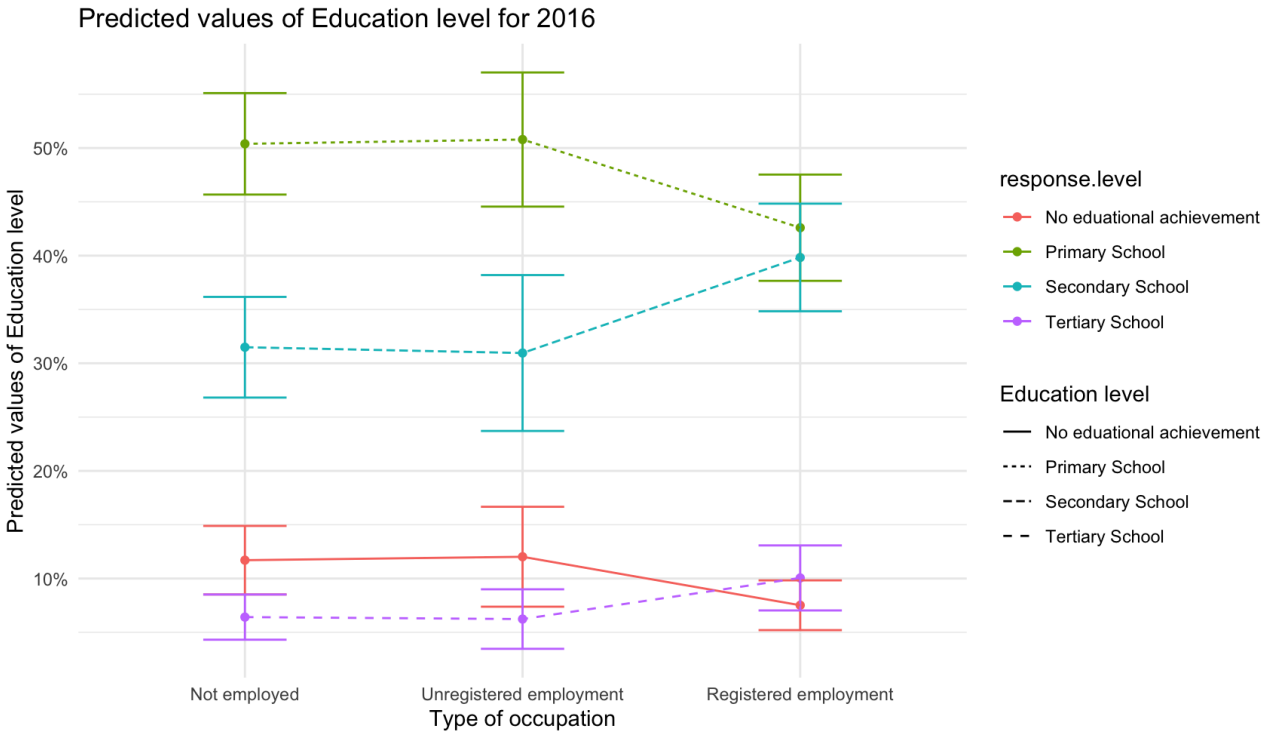
Source: Author's elaboration of ORIM data

Figure 39



Source: Author's elaboration of ORIM data

Figure 40



Source: Author's elaboration of ORIM data

3.5. Results

The models presented above provided some statistical tools to examine the questions laid out at the start of this analysis. Several statistical tests have been used (Chi-squared test for independence, multinomial probit regression and ordered multinomial logit). In their study, Cela et al. (2021), found that Albanian workers are better integrated into the Lombardian labor market, with lower unemployment and higher employment rates and less irregular employment and long-term unemployment compared with other migrants. By contrast, what I found is that the sub-Saharan community is not well integrated in the labor market, comparing to other migrants in the region. My findings are consistent with Kogan (2006) who found that there are significant differences among immigrants in the labor market of European countries and that sub-Saharan migrants are particularly disadvantaged with regard to employment.

What also emerges is that the occupational status of people with sub-Saharan African citizenship compared to people from the rest of the world has changed significantly between 2001 and 2016. In this case, my findings differ slightly from Cela et. al (2021) who argue that the impact of the 2008 crisis is broadly the same across the two groups under consideration – Albanians and all other migrants. I found that Sub-Saharans have become significantly more likely to be not in employment in 2016 compared to 2001, especially men. In addition, compared to 2001 in 2016 there is not a difference anymore in gender amongst the different occupational statuses of people from Sub-Saharan Africa. Finally, both in 2016 and in 2001 the occupation of Sub-Saharan citizens does make a difference in the level of education one has, with people who have registered employment being significantly more likely to have higher levels of educational achievements.

Figure 41 - Labor market indicators by gender, area of origin and period, Lombardy Region, 2001 and 2016

Labor market indicators vs gender					
		Male		**Female**	
		Sub-Saharans	*Other migrants*	*Sub-Saharans*	*Other migrants*
Percentage of unemployment migrants among labor force					
	Pre-crisis - 2001	8.15	7.87	7.85	11.93
	Post crisis - 2016	28.90	8.59	15.10	17.67
Percentage of irregular workers among employed population					
	Pre-crisis - 2001	19.05	17.56	5.43	10.26
	Post crisis - 2016	19.42	6.80	7.83	6.47
Percentage of employed migrants among active population					
	Pre-crisis - 2001	62.19	54.11	16.24	20.04
	Post crisis - 2016	36.04	40.07	15.77	28.98

Source: Author's elaboration of ORIM data

As Figure 41 shows, in 2001, the unemployment rate was slightly higher for sub-Saharan men than for men with other nationalities, for a slight difference of less than half a percentage point. By contrast, the unemployment rate for sub-Saharan women was lower than for other women, at 7.85% compared to 11.93%. The medium-term effects of the 2008 crisis (at least partially) explain the generalized increase in the unemployment rate, which, however, does not impact the four categories equally. In general, unemployment rises less in the rest of the world than it does for sub-Saharans. The most significant figure, however, is that for sub-Saharan men in particular, for whom the unemployment rate rises by more than 20 %, which is significantly more than the other increases (about half a point for other men, 7 points for sub-Saharan women and 5 points for other women). These data thus reveal a clear deterioration in the labor performance of sub-Saharan men that is probably not only explained by the effects of the crisis.

While in terms of unemployment the effects were quantitatively different but still all in the same direction, with regard to the second indicator the differences between the two groups, sub-Saharan and rest of the world, include variations of a different sign. Indeed, between 2001 and 2016 there is a reduction in the share of irregular workers in the total labor force for immigrants from the rest of the world, of both sexes. The reduction is quite

sharp, from 17.6% to 6.8% for males and from 10.3% to 6.5% for females. On the other hand, there is an increase in women employed in irregular employment in the sub-sample of Sub-Saharans, from 5.43% to 7.83%, and an albeit minimal increase in men, for whom the situation can be considered stable between 2001 and 2016. This could be explained by the fact that the worsening of the overall economic situation did not involve irregular workers, or more likely it is the result of respondents' fear of declaring illegal employment situations.

The indicator relating to the share of employed (regular and irregular) in the active population (15 - 64 years) shows a worsening of the employment situation for men globally, worsening again more markedly for sub-Saharan males, for whom there is a drop of about 26 % (against about minus 14 % for workers in the rest of the world). On the female side, the indicator shows a more comforting figure: for sub-Saharan females there is a minimal decline in the employment rate, from 16.24% to 15.77%, while for females from other countries there is even an increase of almost 9 %.

Figure 42 - Labor market indicators by education level, area of origin and period, Lombardy Region, 2001 and 2016

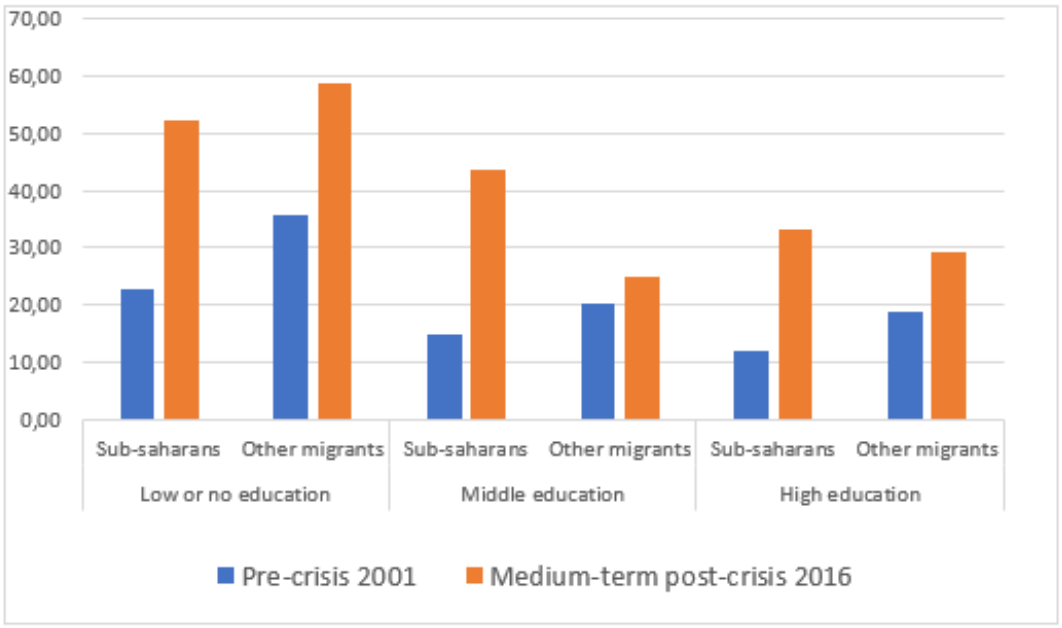
Labor market indicators vs educational level							
		Low or no education		**Middle education**		**High education**	
		Sub-Saharans	*Other migrants*	*Sub-Saharans*	*Other migrants*	*Sub-Saharans*	*Other migrants*
Percentage of unemployment migrants among labor force							
	Pre-crisis - 2001	22.78	35.65	14.95	20.22	11.93	18.71
	Post crisis - 2016	52.56	58.73	43.69	24.89	33.33	29.13
Percentage of irregular workers among employed population							
	Pre-crisis - 2001	26.64	26.83	24.08	27.65	23.87	29.56
	Post crisis - 2016	37.93	23.08	25.98	12.85	33.35	14.83
Percentage of employed migrants among active population							
	Pre-crisis - 2001	13.36	5.99	66.61	72.27	8.48	10.52
	Post crisis - 2016	5.45	1.17	52.82	68.19	6.02	10.60

Source: Author's elaboration of ORIM data

As shown in Figure 42, in 2001 the unemployment rate associated with each education category is lower for sub-Saharans than for the rest of the world (see also Figure 43). For

all immigrants, it seems to be possible to detect that education is associated with a lower level of unemployment, except in the case of graduates from the rest of the world for the year 2016 alone (when the unemployment rate for the most educated was about 4 % higher than for the averagely educated).

Figure 43 - Unemployment rate by education level, area of origin and period, Lombardy Region, 2001 and 2016



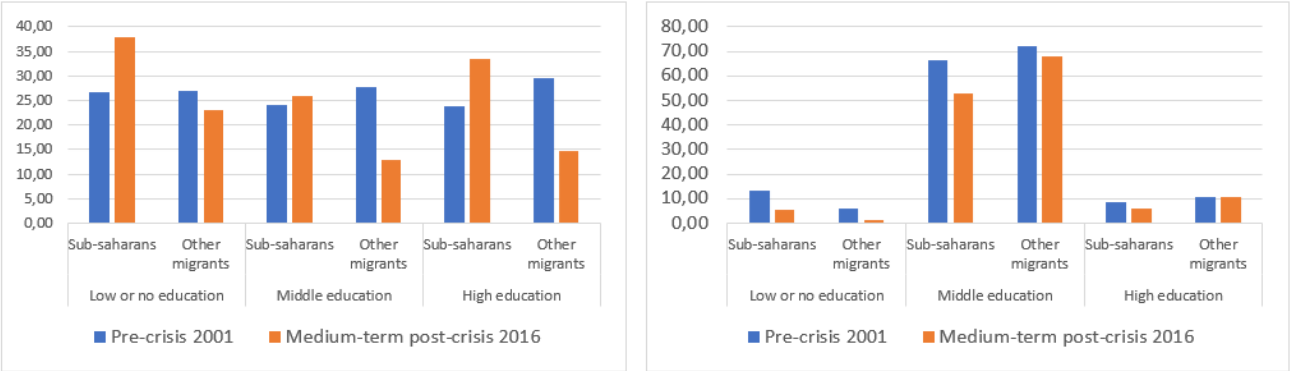
Source: Author's elaboration of ORIM data

One fact that unites the two categories, however, concerns the inter-temporal comparison: as expected, for each level of education, the unemployment rate increased after the crisis. The increase was particularly significant for sub-Saharans. With regard to this sub-sample, there was an increase from 14.9% to 43.7% in the case of the averagely educated (+39 % versus around 4 points for the rest of the world) and from 11.9% to 33.3% for university graduates (+21 % versus around +11). The uneducated category also suffered a worsening of 30 %, again greater than the worsening suffered by other immigrants (+23 %). In general, therefore, the interesting fact that emerges from the analysis is still that the crisis has impacted more on sub-Saharan workers than on the rest of the world, and that for other immigrants the level of unemployment has been affected by the crisis mainly with regard to the least and most educated, remaining almost stable with regard to the averagely educated.

The two indicators on irregular employment and employment in general return different results in terms of the significance of the education category. While there does not seem to be any correlation between the level of education and the share of irregular

workers in the total employed (first panel, Figure 44), there is a clear prevalence of the averagely educated when looking at the share of the employed in the total employed (second panel, Figure 44). This shows that, on the whole, the immigrants living in Lombardy who occupy the largest share of the labor market have a middle school or secondary school diploma and that the remaining two categories occupy only a marginal space.

Figure 44 - Irregular employment rate and employment rate by education level, area of origin and period, Lombardy Region, 2001 and 2016



Source: Author's elaboration of ORIM data

3.6. Discussion and conclusions

The objective of this paper was to understand whether there was a correlation between the gender and level of education of sub-Saharan migrants living in Lombardy and their work performance and what the effects of the 2008 economic crisis had been on the employment status of these immigrants. I built my study on a previous study focused on Albanian immigrants in Italy (Cela, Barbiano di Belgiojoso, King, Ortensi, 2021). In that paper, the authors focused on the labor market outcomes of Albanians in the Italian region of Lombardy, using a unique set of survey data from the region's Observatory on Integration and Multiethnicity (ORIM) to answer questions related to the integration of Albanians into the labor market.

Starting from the data collected by ORIM, I developed a study aimed at capturing some aspects of the positioning of the sub-Saharan community in the labor market of Lombardy. I focused on this community because, on the one hand, there is limited research on sub-Saharans' labor market outcomes in destination countries; on the other hand, because Italy has been increasingly involved, even if not constantly, in the flows of

people from sub-Saharan countries, therefore knowledge of the effects of this migration flow becomes more important - both for scientific and policy purposes.

I investigated how the employment status of sub-Saharans differs from that of immigrants of all other nationalities, also by focusing on certain characteristics of sub-Saharans – gender and educational level – to find correlations with the employment status of immigrants who possess them. I also compared the results of these analyses intertemporally, to see what variations there had been between the employment situation of immigrants before and after the 2008 economic crisis.

With respect to the correlation between the level of education and work performance, I found that there is no significant correlation with the percentage of irregularly employed persons, but that there is a preponderance of employed persons with an “average" educational qualification (middle school and secondary school) compared to employed persons with low or high educational qualifications. However, as this result is similar for both sub-samples, there seems to be no specificity for sub-Saharans. Nevertheless, an important aspect, peculiar to sub-Saharans, that emerges from the analysis concerns gender. The medium-term effects of the crisis have been more significant on the sub-Saharan population than on immigrants from other countries. While the unemployment rate for sub-Saharan women increased only 2 % more than the increase experienced by other women, the same cannot be said for sub-Saharan men. For the latter, the increase was more than 20 %, so the crisis impacted this category much more than the other three considered (men and women from other countries and sub-Saharan women). The results that emerge from the analysis of the employment rate also show that the most negative effects occurred on sub-Saharans, especially males.

Several explanations could support these results. First, a large proportion of male immigrants are employed in sectors that have been most affected by the effects of the crisis, such as the construction and manufacturing sectors (Venturini and Villosio, 2018). However, this figure alone does not seem to be sufficient to explain such a marked difference from other males – since males of other nationalities are also traditionally employed in the same sectors. Second, it is possible that workers were more involved in the dynamics of moving to other EU countries than the unemployed. In other words, it is possible that there was a matching between labor demand from other countries – perhaps those that were less affected by the effects of the economic crisis – and labor supply from

immigrants who were working in Italy in 2001. Those who had a job in Italy transferred their know-how (also in terms of low qualifications) elsewhere, thus impoverishing the share of workers in Italy. Indeed, as is well known, Italy is among the European countries that suffered the greatest negative effects of the 2008 crisis, when it became the European debt crisis. Another explanation could be found in the shift of workers from formal to informal employment channels – such as the predominantly agricultural illegal labor system or illegal street trading – and a concomitant reluctance to declare such irregularity when filling in the questionnaire (but this would not justify the difference with the approach to filling in adopted in 2001).

Among the reasons that may be peculiar to sub-Saharan immigration, two seem the most significant. First, it is possible that native attitudes towards the category of sub-Saharan immigrants are still conditioned by racial prejudice and that this hampers the labor (as well as social) integration of immigrants, leading them to move to countries that are more welcoming from this point of view. Negative attitudes towards sub-Saharan immigrants are often due, among other things, to the idea that they are a burden on the welfare system supported by citizens, which allows them to live in dignity without the need to work. This calls into question the second reason: since many of these migrants arrive in Italy by sea through illegal channels, many of them apply for asylum as soon as they disembark and are included in the reception system under Italian law. The period spent in some of the various categories of reception centers is usually a period during which the guest is not allowed to obtain employment; for this reason, for example, initiatives are implemented to support integration into the labor market, which however often do not provide for actual integration but only prepare the individual to perform certain jobs, through the improvement of soft skills and the Italian language (e.g. projects financed by AMIF and managed by the Ministry of Labor and Social Policies). If the guests of these centers (or in any case all those awaiting the outcome of the refugee status recognition process) were to fill out the questionnaire, they would declare that they were unemployed, and this would partly explain the outcome of the analysis.

The last two reasons lead us to reflect on some aspects of the migration phenomenon in Italy. On the one hand, it seems necessary to ensure that knowledge of this phenomenon is realistic and based on data rather than on news, often purely propagandistic, aimed at portraying immigrants as totally dependent on Italian taxpayers. In fact, a large part of the funding for reception projects also comes from European funds, as in the case of the

AMIF fund (almost 400 million euros of European Commission share alone, to which an equal national share is added). On the other hand, it also seems necessary to foresee a path of real integration of these people into the labor market even during their stay in reception centers and while waiting for the outcome of refugee status procedures, also to avoid all the harmful consequences of a prolonged state of unemployment, such as the loss of professional skills and in the most serious cases the tendency to enter organized crime to cope with the lack of employment and remuneration. Indeed, the tendency of immigrants to be employed in irregular occupations – an area in which this last considered aspect, i.e., the possibility of joining organized crime, falls – seems peculiar to sub-Saharans, especially after the 2008 crisis. As the analysis showed, in fact, after the 2008 crisis the percentage of irregular workers in relation to the total number of workers decreased for women and men from other countries, while it remained stable or increased for sub-Saharans, males and females, respectively.

This study represents a first attempt to approach the study of the positioning of immigrants of sub-Saharan origin in the Italian labor market. Despite the results achieved, the analysis has some limitations, mainly due to the use of two datasets covering two specific years rather than a series of datasets covering several consecutive years. Possible future developments could mainly involve three dimensions: a thematic dimension, a geographical dimension and a temporal dimension. With regard to the thematic dimension, research could be deepened to understand the extent to which labor performance is dependent on some variables, including those considered in this study. Using more advanced econometric tools and methodological approaches, one should quantify the contribution that each variable makes to the achievement of a better labor market integration. Furthermore, it would be interesting to refine the study also on the basis of the labor sector in which immigrants are employed, in order to identify possible specific "niches" for sub-Saharan immigrants. The geographical dimension should be extended to the study of the employment position in other Italian regions, to allow comparisons to be made between the various areas, and then at a national level; for this to happen, it is necessary to implement the system of labor market data collection by subdividing them according to the citizenship of the workers. Furthermore, it would be interesting to compare the differences between the labor performance of workers from sub-Saharan Africa and that of workers from North Africa. Finally, an in-depth time dimension of this study could compare employment status relative to other periods, such

as before and after the COVID-19 pandemic crisis, or in relation to other particular events that occurred in sub-Saharan African countries.

Conclusion

Migration has seen unprecedented growth in recent decades. There were approximately 281 million international migrants worldwide in 2020, 3.6 percent of the global population, about 128 million more than in 1990 (153 million - 2.8 % of the then global population), and more than three times higher than in 1970 (84 million) (IOM, 2022).

The growth in the size of migration that has occurred in recent decades has brought about several global changes. These changes, technological, climatic, and demographic, have in turn contributed to inducing (or forcing) hundreds of millions of people to migrate. Thus, there appears to be a bidirectional relationship between causes and effects of migration.

Within the literature, the causes and effects of migration have been abundantly studied. Voluntary migration has been explained on the basis of push and pull factors, mostly arising from differences between the characteristics of the countries of origin and destination of the flows. Differences related to the labor market have played and play a key role in determining migration (see, among many others, Smith, 1776; Hicks, 1932; Harris and Todaro, 1970; Borjas, 1987; Massey *et al*., 1993; Peri, 2012). This is evidenced by the fact that the majority of migrants are workers (about 62 % in 2019) (ILO 2021). The topic of labor migration has been widely analyzed in the literature, and numerous theories – including labor market competition, human capital, and labor market theories – have been developed, extended, tested, and challenged. Similarly, the effects of migration on the labor market have also been studied, with reference to the various subgroups on which they unfold (natives, immigrants, high and low-skilled workers) (see, among many others, Card 1990; Altonji and Card 1991; Friedberg and Hunt, 1995; Smith and Edmonston 1997; Card and Lewis 2007; Borjas, 2003; Ottaviano and Peri, 2006; Dustmann, Frattini and Preston, 2013). Theories on the positioning of migrants in the labor market of the destination country and the role of social networks demonstrate the growing interest of the literature in the labor outcomes of migrants as well as the processes that determine them (see, among many others, Piore, 1979; Waldinger, 1994; Stark and Stark, 1991; Borjas, 1998; Eckstein and Peri, 2018; Kalleberg, 2011; Parson, Reysenbach and Wahba, 2020).

The mentioned bidirectional relationship between the causes and effects of migration is particularly evident when looking at the labor market.

Discussing on how labor market affects migration means examining the role of labor market conditions in motivating individuals to migrate. In this case, labor market conditions – such as unemployment rates, wages, and job opportunities – are seen as push or pull factors that drive individuals to seek better economic opportunities in other regions or countries. On the other hand, examining how migration affects the labor market means exploring the impact of migrant inflows on the origin or host country's labor market outcomes. Migration can affect labor market outcomes in several ways, including changing the supply and demand of labor, affecting wages and employment opportunities for both immigrants and native-born workers, and potentially leading to changes in industry composition and skill requirements.

The overall objective of this thesis was to improve the knowledge of the migration phenomenon, also by better understanding this two-way relationship between cause and effects of migration.

To achieve it, I began by studying the migration phenomenon from a purely descriptive point of view. I analyzed the main global and regional trends related to the characteristics and size of the migrant population and its composition and distribution among countries. This picture showed, as anticipated, that most migrants are workers, and this led me to focus on the link between the labor market and migration. Keeping this link as the main focus of the research, I then tried to answer the question I asked myself before I began writing the second chapter, namely: given the two-way relationship between determinants (causes) and effects (consequences) of migration, which effects "weigh" more heavily on the decision to migrate according to the literature? The effects on natives, the effects on migrants, or the overall effects?

I therefore analyzed numerous contributions by Economists to answer this question. The contributions include work related to the determinants of migration, mainly concerning the labor market, but also other aspects such as public goods or family ties; work related to the effects of migration on natives, concerning both the labor market and other aspects such as natives' attitudes toward immigrants; and work related to the effects on migrants, especially with regard to theories of niching and social networking.

As expected, according to the literature the decision to migrate is more related to the effects of migration *on migrants* than to the effects on natives or on the whole country of destination. The role of the effects of migration on natives or on the country is much studied in the literature on the effects of migration, but its influence on the decision to migrate seems to be considered little or none. What also emerges from my survey of the literature is that labor market-related aspects still play a crucial role in determining the decision to migrate end remain one of the most studied features in the economic literature on migration.

Accordingly, in the last chapter I focused on studying a particular case of the link between migration and the labor market.

The study was aimed at capturing some aspects of the positioning of the sub-Saharan community in the labor market of Lombardy, comparing to immigrants from other countries. The very lack of literature on this precise topic prompted me to want to explore it in order to start a small strand of research on this issue, with a view to a greater future in-depth study on the individual nationalities that make up the sub-Saharan community. Moreover, since Italy has been increasingly involved, even if not constantly, in the flows of people from sub-Saharan countries in the last decade, also as a transit country, the knowledge of the dynamics affecting these nationalities became more important - both for scientific and policy purposes.

I investigated how the employment status of sub-Saharans differs from that of immigrants of all other nationalities, also by focusing on certain characteristics of sub-Saharans – gender and educational level – to find correlations with the employment status of immigrants who possess them. I also compared the results of these analyses intertemporally, to see what variations there had been between the employment situation of immigrants before and after the 2008 economic crisis.

I used several statistical tests (Chi-squared test for independence, multinomial probit regression and ordered multinomial logit). What emerged is that the occupational status of people with sub-Saharan African citizenship compared to people from the rest of the world has changed significantly between 2001 and 2016. Sub-Saharans have become significantly more likely to be not in employment in 2016 compared to 2001. In addition, compared to 2001 in 2016 there is not a difference anymore in gender amongst the different occupational statuses of people from Sub-Saharan Africa. Finally, both in 2016

and in 2001 the occupation of Sub-Saharan citizens does make a difference in the level of education one has, with people who have registered employment being significantly more likely to have higher levels of educational achievements.

In summary, through the writing of this thesis I have realized my goal - that of contributing to the study of the migration phenomenon, also and especially thanks to the third chapter, which represents an attempt to fill a gap that currently exists in the literatur related to the link between sub-Saharan migration and the Italian labor market. A potential area in which I would like to deepen my studies, on the other hand, concerns the other goal I have set myself, namely, to thoroughly investigate the bidirectional link between causes and effects of migration. To this end, one potential area of research is to understand whether and how the labor outcomes of sub-Saharans, which emerged from Chapter III, affect the decision of other sub-Saharan migrants to migrate to Italy, specifically to Lombardy.

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Appendix

List of sub-Saharan countries.

Central Africa:

Democratic Republic of Congo

Republic of Congo

Central African Republic

Rwanda

Burundi

East Africa:

Sudan

South Sudan

Kenya

Tanzania

Uganda

Djibouti

Eritrea

Ethiopia

Somalia

Southern Africa:

Angola

Botswana

Lesotho

Malawi

Mozambique

Namibia

South Africa

Swaziland

Zambia

Zimbabwe

West Africa:

Benin

Burkina Faso

Cameroon

Chad

Ivory Coast

Equatorial Guinea

Gabon

Gambia

Ghana

Guinea

Guinea-Bissau

Liberia

Mali

Mauritania

Niger

Nigeria

Senegal

Sierra Leone

Togo

Island nations:

Cape Verde

Comoros

Madagascar

Mauritius

São Tomé and Príncipe

Seychelles

Territories:

Mayotte (France)

Reunion (France)

Socotra (Yemen)

Saint Helena and Ascension (United Kingdom)

Table A1

Contingency table, model 2, 2001 with row percentages, Chi-squared, and Cramer's V

Gender	*Occupational status*				***Total***
	Registered employment	In education	Not employed	Unregistered employment	
Male	986 66.6 %	23 1.6 %	159 10.7 %	312 21.1 %	1480 100 %
Female	250 49.1 %	17 3.3 %	153 30.1 %	89 17.5 %	509 100 %
Total	1236 62.1 %	40 2 %	312 15.7 %	401 20.2 %	1989 100 %

χ^2=117.196 · df=3 · Cramer's V=0.243 · p=0.000

Table A2

Contingency table, model 2, 2016 with row percentages, Chi-squared, and Cramer's V

Gender	*Occupational status*				***Total***
	Registered employment	In education	Not employed	Unregistered employment	
Male	173 38.4 %	32 7.1 %	178 39.6 %	67 14.9 %	450 100 %
Female	78 37.5 %	10 4.8 %	93 44.7 %	27 13 %	208 100 %
Total	251 38.1 %	42 6.4 %	271 41.2 %	94 14.3 %	658 100 %

χ^2=2.496 · df=3 · Cramer's V=0.062 · p=0.476

Table B1

Contingency table, model 3, 2001 with row percentages, Chi-squared, and Cramer's V

Education level	*Occupational status*				***Total***
	Registered employment	In education	Not employed	Unregistered employment	
Primary School	575 62.3 %	8 0.9 %	150 16.3 %	190 20.6 %	923 100 %
No educational achievement	179 55.9 %	4 1.2 %	72 22.5 %	65 20.3 %	320 100 %
Secondary School	349 65 %	21 3.9 %	64 11.9 %	103 19.2 %	537 100 %
Tertiary School	118 64.8 %	6 3.3 %	21 11.5 %	37 20.3 %	182 100 %
Total	1221 62.2 %	39 2 %	307 15.6 %	395 20.1 %	1962 100 %

χ^2=38.061 · df=9 · Cramer's V=0.080 · Fisher's p=0.000

Table B2

Contingency table, model 3, 2016 with row percentages, Chi-squared, and Cramer's V

Education level	*Occupational status*				***Total***
	Registered employment	In education	Not employed	Unregistered employment	
Primary School	106 34.4 %	21 6.8 %	132 42.9 %	49 15.9 %	308 100 %
No educational achievement	18 28.1 %	3 4.7 %	32 50 %	11 17.2 %	64 100 %
Secondary School	102 45.1 %	14 6.2 %	86 38.1 %	24 10.6 %	226 100 %
Tertiary School	23 44.2 %	4 7.7 %	16 30.8 %	9 17.3 %	52 100 %
Total	249 38.3 %	42 6.5 %	266 40.9 %	93 14.3 %	650 100 %

χ^2=13.428 · df=9 · Cramer's V=0.083 · Fisher's p=0.124