

ABSTRACT

The aim of this study is to determine the relationship between immigration and domestic labour market in Italy, the country characterized by dominantly unskilled population movements. The research was carried out using the data obtained from statistical databases of following institutions Eurostat, OECD, ISTAT and UN regarding the labour market characteristics such as employment, unemployment, wages, education, participation rate, age and more. In order to introduce the concept of migration the theoretical background of the phenomenon was presented and the most significant terms and definitions discussed. The socio-economic effects of population movements were examined focusing firstly on the European and European Union countries, and later on the specific case of Italy. Subsequently, the relationship between immigration and labour market was examined on a larger sample - regression analysis was conducted using the data for 21 European countries (including Italy) across 20 years, from 2000 to 2020 using the random and fixed effects models. The adjustment of models was examined by using the appropriate tests. Firstly the model was constructed using only one explanatory variable, to which later on additional control variables were added. Main findings suggest that the share of the foreign population in the total population is statistically significant determinant of unemployment, wages and employment.

Keywords: immigration, labour market, regression analysis, foreign population

Field of science and technology in accordance with OECD requirements: <social science>, <economics>, <economics and business>, <econometrics>

STRESZCZENIE

Celem niniejszego opracowania jest określenie relacji pomiędzy imigracją a krajowym rynkiem pracy we Włoszech, kraju charakteryzującym się dominującym napływem ludności z niskim wykształceniem. Badania przeprowadzono z wykorzystaniem danych uzyskanych z baz statystycznych, takich instytucji jak Eurostat, OECD, ISTAT i ONZ, dotyczących cech rynku pracy, takich jak zatrudnienie, bezrobocie, zarobki, wykształcenie, współczynnik aktywności zawodowej, wiek oraz innych. W celu przybliżenia pojęcia migracji omówiono teoretyczne aspekty zagadnienia oraz jego najważniejsze terminy i definicje. Zbadano społeczno-ekonomiczne skutki migracji, skupiając się najpierw na krajach Europy i Unii Europejskiej, a potem na specyficznym przypadku Włoch. Następnie, relacja imigracja-rynek pracy została zbadana na szerszej próbie - analiza regresji została przeprowadzona z wykorzystaniem danych dla 21 krajów europejskich (w tym Włoch) na przestrzeni 20 lat (2000-2020), przy użyciu modeli z efektami losowymi i efektami stałymi. Dopasowanie modeli zbadano za pomocą odpowiednich testów. Początkowo modele zostały stworzone przy użyciu tylko jednej zmiennej objaśniającej, do której później dodano dodatkowe zmienne kontrolne. Uzyskane wyniki sugerują, że udział populacji zagranicznej w całości populacji jest statystycznie istotnym determinantem bezrobocia, płac i zatrudnienia.

Słowa kluczowe: imigracja, rynek pracy, regresja, populacja zagraniczna

Dziedzina nauki i techniki, zgodnie z wymogami OECD: <nauki społeczne>, <ekonomia>, <ekonomia i biznes>, <ekonometria>

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LIST OF IMPORTANT SYMBOLS AND ABBREVIATIONS

FPOP - Foreign population as % of total population

EMP - Employment rate % (the ratio of the employed to the working age population)

UNEMP - Unemployment rate % (numbers of unemployed people as a percentage of the labour force)

MED_IN - Median income in euros

FPR - Foreign-born participation rate %

L_EDU - Percentage of foreign population with less than primary, primary and lower secondary education attainment level (levels 0-2)

UT_EDU - Percentage of foreign population with upper secondary, post-secondary non-tertiary education attainment level (levels 3-8)

WAG - Proxy of wage in euros

y_{it} – dependent variable for i-th object in t-th period

x_{it} – explanatory variable for i-th object in t-th period

β - a structural parameter expressing the influence of the variable of explanatory note X

v_{it} – vector which is the sum of individual effects u_{it} and independent random factor e_{it}

α_i – individual effects, part of the volatility of the variable y characteristic for the i-th unit; (N effects)

u_{it} – random factor

ε_{it} – random effect

INTRODUCTION, OBJECTIVES AND AIMS OF THESIS

Immigration, according to definition, is a population movement from the home country to a new country of destination, of which people are not natives. The phenomenon has taken place for many ages, however its importance has not diminished. Throughout history, globalization has enforced migration flows by improvement in technology, reduced transportation costs and increased movement availability. As a result immigration has become increasingly common all around the globe and is now of great significance. Due to its popularity it is influencing social, cultural, economic as well as political domains.

The aim of this study is to contribute to a better comprehension of the impact of international migration on domestic labour market in Italy. The concept of migration has been studied and analysed for decades, however the issue still generates much debate. Therefore this study aims to understand the role played by the inflow of foreigners on the host labour market basing on evidence from Italy.

The paper consists of four chapters and a summary. In order to introduce the concept of migration, the first chapter consists of the theoretical background of the phenomenon by discussing the most significant terms and definitions connected to immigration such as theories of migration and drivers of migration. Having introduced the theoretical approach to the issue, in the next part of the paper the socio-economic effects of population movements were examined. Emphasis was put on demographic concerns and the demographic structures of both native's and foreigners' were presented. Moreover social concerns were addressed such as the possible influence of foreign population on the amount of people at poverty risk and social exclusion. In the following section the emphasis was put exclusively on the Italian situation as the change of immigrant share and labour market performance in Italy were discussed. Factors such as education, age and skill profile of immigrants were analysed. Moreover, in this chapter the internal migration between North and South of Italy was described as well as the immigration share in each Italian province. The methodology and results of regression analysis of the effects of immigration on labour market are presented in the last chapter. however in order to obtain reliable results of the study, a wider sample was taken under consideration. Estimating the model for only one country without a wide range of data may result in distorted results and compromise final conclusions. Therefore the regression analysis was conducted using the data for 21 European countries across 20 years, from 2000 to 2020. The analysis was performed with the use of panel models both with random effects and fixed effects models. Univariate panel data models were created for four dependent variables, for which in the next step extended panel data models were created in order to obtain more reliable results.

The summary contains final conclusions regarding the results obtained from the performed analysis and overall assessment of the immigrant effect on labour market in Italy.

1. INTERNATIONAL MIGRATION FLOWS – THEORETICAL AND EMPIRICAL BACKGROUND

1.1. Review of the main concepts and definitions used in migration studies.

Throughout the years the topic of migration has gained a great deal of importance in respect of its immense impact on various spheres of life. Migration has been influencing social, cultural, economic as well as political domains. The phenomenon affects the size of the population as well as its structure hence studying it is essential for determining the distribution of population and supply of labour in the country. Therefore gaining knowledge on this particular subject and all the complexities connected to it including types, trends along with determinants are crucial for understanding its effects and specificity. What's more it gives a chance for formulating economic and other policies by the government, which is of utmost importance whereby those policies are meant to influence the level of documented immigration into the country and at the same time are affecting the supply of skilled and semi-skilled labourers as well as economic and social development of the country (Sociology discussion, [date of access: 25.03.2021]).

However in order to fully understand the importance of this term it's relevant to bring forward some of its definitions. Not to be mistaken, intra-mobility is defined as movement of people within a particular country or countries as mobile workers. In case where this particular move is at least semi-permanent, this forms a internal migration. "Shorter-term movement includes the phenomena of posted workers and cross-border commuters." (Eurofund, [date of access: 25.03.2021]). According to The International Organization for Migration (IOM) migration is "The movement of persons away from their place of usual residence, either across an international border or within a State." (IOM, [date of access: 25.03.2021]). Demographic Dictionary of United Nations, however, puts it simply in following words "Migration is such an event in which people move from one geographical area to another geographical area. When people leaving their place of residence go to live permanently in another area then this is called migration."

We can distinguish between several classifications of migration, according to diverse criteria. Firstly general classification should be thoroughly described. Starting from regular migration which "occurs in compliance with the laws of the country of origin, transit and destination" (IOM, [date of access: 25.03.2021]). Irregular migration however, describes a "movement of persons that takes place outside the laws, regulations, or international agreements governing the entry into or exit from the State of origin, transit or destination" (IOM, [date of access: 25.03.2021]). Last general term used in order to define a individual instead of a whole phenomenon is migrant, which "is an umbrella term, that is not precisely defined under international law. However, most specialists agree migrant is an individual who moves away from one's place of origin or usual residence regardless of the legal status or reason for migration. This term describes a great number of legal categories of persons, for example migrant workers, international students by that movement of people whose status is not specifically defined under law (UN, [date of access: 25.03.2021]). In order to describe the whole phenomenon we can

distinguish the term emigration which is the act of moving from a place of abode, home or country to life elsewhere, so that the country of destination effectively becomes the new place of residence (Emigration, [date of access: 25.03.2021]) and immigration in other words the act of moving into a country for the purpose of it becoming the new abode, so that the country of destination effectively becomes his or her new country of usual residence. Two other general types of migration based on the duration of movement are ought to be described, return migration which describes a return of migrants from the place of destination to the place of origin, where circular migration defines a repeated movement between the place of destination and place of origin.

Secondly we can distinguish migration based on motive. There are several motivations for people to migrate, whereas in some cases the migration is forced, which is called a displacement that is human mobility which is a result of forced change of habitual residence. Two types are distinguished: environmental and political displacement. The first one occurs when persons are forced to leave their country of residence on account of sudden or progressive changes in the environment. Whereas where persons are feeling threatened on behalf of their freedom, safety and liberty as a subject of prosecution of religious, ethnic, racial or political background (Baggio, n.d). An individual who has left their country of origin seeking international protection from persecution and human rights violations is called an Asylum seeker. A person who hasn't yet been legally recognized as a refugee and is awaiting for the response on their asylum claim (IOM, [date of access: 25.03.2021]). Refugee however is an individual who has fled their place of origin due to high risk of human rights violations and persecution. Refugee is unwilling to return to one's country as its government fails to protect one from the dangers. Refugees have a right to international protection. Initially, every recognized refugee is an asylum seeker (Amnesty International, [date of access: 25.03.2021]). One of the main motivation of migration is a search of labour, therefore labour migration is a movement of people from one State to another, or within their own place of usual residence, for the purpose of employment. Migration may also be a result of collective behaviour as this kind of human mobility identified as a method of maintaining group cohesion. An example of such behaviour is seen amongst some ethnic or nomadic groups.

Thirdly, migration based on distance can be differentiated. External migration is the movement of persons from their place of usual residence and across an international border to a country of which they are not nationals. Taking under consideration the direction of migration flows several types of international migration are distinguished (IOM, [date of access: 25.03.2021]). This particular type of migration is also divided based upon geographic context. When mobility takes place between two neighbour countries it's called neighbour migration. Transoceanic migration describes a movement requiring crossing one or more oceans, whereas transcontinental migration is a movement from one continent to another. As opposed to external migration the term of internal migration has been developed which describes the change of place of usual residence for a new temporary or permanent residence. Various types of internal migration are determined. First type is rural-urban, which is mobility from the countryside to a larger municipality, second type is urban-rural migration that is mobility from the city to a

countryside. The last one is nomadism which describes a cyclical or periodical movement within a territory.

Moreover, another classification of migration focuses around duration of migration. Seasonal migration is concerning migrant workers, it follows particular patterns that are known and predictable. This type of migration lasts only for a limited time and is dependent on the work performed by labourer. Temporary migration describes a movement for a specific purpose with the intention of returning to country of origin or onward movement (EC, [date of access: 25.03.2021]). However, a movement for a specific purpose with no intention of returning to country of origin is called a permanent migration. A specific classification has been established in order to correctly describe the differences between various migration groups. Migration population consists of people who still have their home country nationality, however who reside in a place of destination at that point in time. Migration stock is the number of people born in a country other than that of their origin. This term also takes refugees into account. Whether migration flow is the number of individuals crossing borders within a specific time period in order to establish their new place of residence.

The last classification of the phenomenon is based on demographic and economic factors. Taking under consideration demographic variables three generations of migration can be presented. First generation is used as referred to people who have actually migrated from their place of origin and settled in the place of destination. Second generation term stands for the children of first generation migrants, who were born either in the place of destination or their home country and lastly, third generation describes grandchildren of the first generation migrants, who are born in the place of destination. When it comes to economic reasons terms commonly used describe the level of competence of migrants. In general migrant 'human power' includes migrants in working age residing in a specific area. Whether skilled migration describes migrants that make significant contribution to the place of destination's economy and fill available work positions. It also plays an important role in regional development as migrants provide labour and skills which cannot be sourced locally. What's more the shift towards highly skilled workers occurred in developed economies due to globalization and technological innovation (Baggio, n.d). In comparison unskilled migration refers to migrants associated with a minimal economic value for the performed work or a limited set of skills. It is mainly characterized by a lower educational attainment and usually results in lower remuneration (Unskilled labour, [date of access: 25.03.2021]).

1.2. *Alternative theories of migration*

Over the past decades globalization has enforced migration flow, mostly by drastically reducing its costs through decreasing transportation costs, low cost accommodation facilities and increasing movement availability in European Union or countries with signed multilateral and bilateral treaties. Moreover political situation, economic and technological development have provided stable and safe environment for many societies and encouraged the skilled and professional labour migration. Consequently, human mobility has become a popular practice,

however even after all these years international migration remains a complex and diverse issue to which no single theory is able to provide a full explanation connecting issues from many scientific disciplines (Massey et al., 1993, pp. 431-436).

Immigration theories representing various perspectives from different scientific disciplines have a particular classification. Theories are divided into 3 categories namely: micro-level, meso-level and macro-level. Micro-level theories establish that migration decisions are made on individual level hence they are strongly connected with people's expectations. Macro-level theories are based on an assumption where decision to migrate is made collectively. The last category meso-level theories base on a combination of two previous theories (Wimalaratana, 2016, pp. 17-27). All theories described are visible on the figure 1.

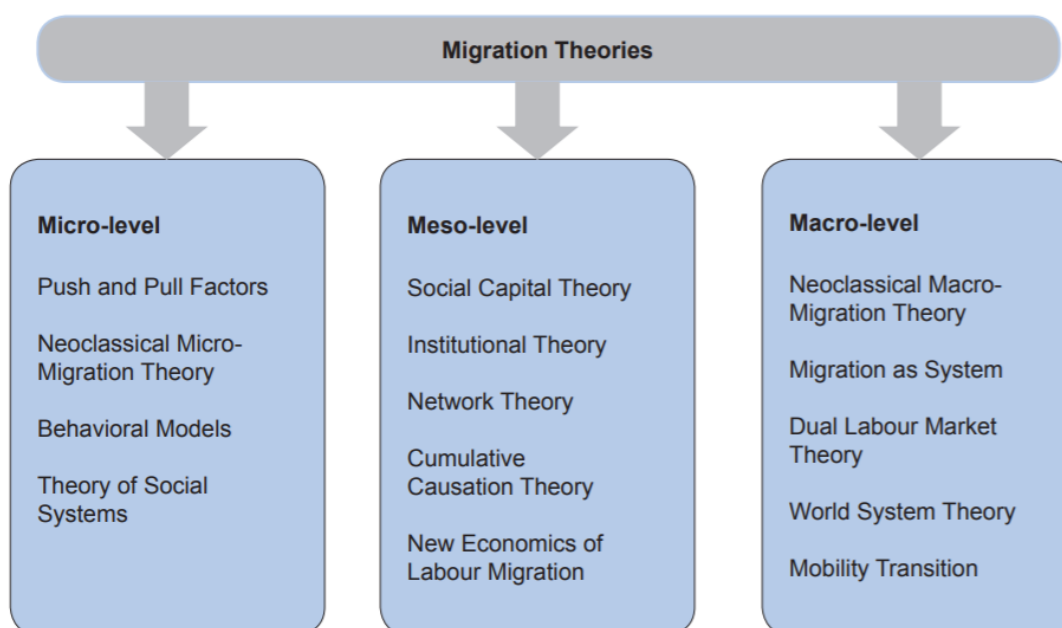


Figure 1.1 Classification of migration theories
Source: Wimalaratana W.: International Migration and Migration Theories. Social Affairs Journal, 2016

The drivers of international migration are easier to comprehend through incorporating a wide range of perspectives and factors. Below nine theories of immigration developed by experts are outlined in order to explain the main factors causing population movements.

Neoclassical theory is the first theoretical framework developed in order to explain labour migration, stating that human mobility is caused by the dissimilarities in wages and labour markets between countries, hence it is the result of differences between labour demand and labour supply (Neoclassical economics and the new economics of migration, [date of access: 25.03.2021]). Basic assumption of this theory explains that migration is prompted by economic comparisons of costs and benefits related to the mobility (Jones, Faas, 2017). Relocating is connected with a great deal of cost and risk but most migrants, making individual decisions, establish that higher earnings in the long run will compensate the trouble. Moreover, according to this particular theory if wage differences were to be removed, labour migration would stop (EC, [date of access: 25.03.2021]).

New Economics provides variation of the theory mentioned above. In comparison to neoclassical theory new economics states that decisions to migrate are not taken at individual level but are often a result of collective decision and are seen as a mean to increase income and diversify risks (EC, [date of access: 25.03.2021]). Family member that decides to migrate is able to later on support their family in the place of origin and the other way round. Insurance systems, welfare state, unemployment benefits, capital markets, future markets as well as credit institutions are used as a method to minimise risks in developed countries, which tend to be migrants place of destination (Massey et al., 1993, pp. 431-436). Whereas situation looks entirely different in developing countries, which tend to be places of origin, as most of households are forced to deal with the risks themselves without no help from above. Another essential assumption, in this specific theory, states that removing wage differentials will not affect international migration which will continue, whereas according to neoclassical theory in given conditions movement would come to an end (Van Meeteren, Pereira, 2018, pp. 926-929).

Migration Systems and Networks focuses on the role of networks that has long been studied and observed from many various perspectives in migration research. Theory focuses mainly on connection between place of origin and destination (Van Meeteren, Pereira, 2018, pp. 926-929). It is established that once migration occurs potential migrants in the place of residence become strongly connected to place of destination, which comes as an opportunity for future employment and raise in income as migratory movements are strongly connected to long-standing links between countries of origin and destination. Whereby it becomes more approachable for people to migrate as they possess an family attachment and possible assistance in the place of destination (EC, [date of access: 26.03.2021]).

Institutional theory brings attention to the significant imbalance between people seeking entry to developed countries through legal channels and the scarcity of immigrant visas available in a given place of destination (EC, [date of access: 26.03.2021]). As a solution to the mismatch and barriers that keep people out a great deal of private institutions and non-profit organisations have been established. Although the imbalance have created a migration economy and voluntary organisations that try to enforce rights and improve treatment of legal and illegal migrants this mismatch created a niche for smugglers and at the same time yielded a black market in population movement. Humanitarian organisations, in their efforts to protect migrants, provide resources and services such as legal advices, social services, awareness on immigration laws and recruitment agencies for migrants in need (Massey et al., 1993, pp. 431-436). Even though all this effort is performed, controlling the flow of migration remains a difficulty for governments as the whole process of legalization of the migrant stay is challenging and certainly difficult to regulate (Wimalaratana, 2016, pp. 17-27).

According to world system theory, migration is a natural consequence of dislocations that take place in the process of capitalist development (Massey et al., 1993, pp. 431-436). Theory also highlights migration from the peripheral developing countries to capitalist ones and at the same time it emphasizes the creation of a loop in which migrants move from the periphery to capitalist country, while machinery, capital and goods move from capitalist country to the

peripheral developing countries. Expansion of capitalism all over the globe has caused an enormous amount of human population to be included in world market economy (EC, [date of access: 26.03.2021]). As markets are in control of labour, raw materials and land migration, migration flow will not disappear. Basing on available evidence it is established that measurements such as direct foreign investment, industrialization, agricultural development are actually initiating migration flows. However the theory is not backed up by sufficient analytical attention, hence drawing conclusions about the explanatory power of this theory remains an obstacle.

Dual or segmented labour market theory is seen as a divergence from previous ones as it argues that migration is not a result of decision made on individual level, but a consequence of labour demands of industrialized countries (Wimalaratana, 2016, pp. 17-27). Not only does this theory undermine the economic decision making process but also the extent to which migrant decisions are based on social context (Massey et al., 1993, pp. 431-436). According to this theory immigrants are rejected from primary labour market and placed incommensurately in the secondary labour market on the account of the requirement for cheap work force in modern societies. Migrants situation is entirely dependent on the labour market in the given receiving country, which tends to be segmented, whereby native born employees possess opportunities for employment, high wages, improved and safe working conditions, opportunities for development and gaining a career, whereas migrants regardless of their education background are relocated to labour-intensive or tertiary sectors that do not provide many career opportunities moreover they provide only low wages, precarious jobs and dangerous working conditions (EC, [date of access: 26.03.2021]). Emphasize is also put on the reasons of migration which are said to be pull factors seen in receiving institutions.

Mobility transition theory focuses mostly on mobility as a defining aspect of modernity, in which countries make transitions through social and demographic stages. Mobility transition model is composed of five phases (Gedik, 2005).

According to Zelinsky these five stages of mobility transition can be distinguished (Zelinsky, 1971, pp. 337-347).:

- “Premodern traditional society” describes the sole beginnings of urbanisation, hence migration is a scarce phenomenon.
- “Early transitional society” features mostly the great increase in rural-to-urban migration as a result of modernisation. Significant flow of migrants to foreign places of destination.
- In late transitional society phase rural-to-urban migration is already slowly slackening, however it does not lose its importance. At the same time emigration is on the decline.
- The advanced society indicates that as countries transition into advanced economies the rural-to-urban migration is further reduced, however the urban-to-urban and circular migration rapidly increase so does migration of low-skilled and un-skilled workers from less developed countries.
- A future superadvanced society describes that according to the increase of migration flows more strict political control is conducted. Further immigration of low-skilled workers.

At this stage a large amount of residential migrants may have interurban origins. Advanced economies may turn into net importers of semi-skilled or un-skilled workers from less developed countries.

Policy theory highlights the role of immigration policies. Assumptions underlying a policy focus mostly on setting international and national policies designed for controlling and regulating the flow of increasing phenomena migration (EC, [date of access: 26.03.2021]).

Cumulative causation created in 1956 by Myrdal, later developed by Massey. The theory clarifies the reason for continued rise in migration flow and explains that the number of migrants grows over a period of time after the original migration flow, as the person from sending community provides resources and job opportunities which minimizes risk in the place of destination for other community members. As follows the possibility of other representatives of that societies to initiate a migratory outing increases. The Cumulative Causation theory focused mostly on migrant flows and connected to it relations between people, may be subsumed into Migration Systems and Network theory (Massey et al., 1993, pp. 431-436).

Although the development of migration theories was a mean allowing to comprehend the phenomena and all the complexity connected to it, developed theories are not necessarily contradictory, however they represent various perspectives on the issue, based on a number of scientific disciplines (Wimalaratana, 2016, pp. 17-27). Differences between theories as well as their assumptions were highlighted in the descriptions, which is a proof that migration flow being a phenomena, that attracts a wide range of researchers and scientists from different fields, has a great influence on the development of countries and its economies. Therefore depending on which theory governments of countries choose to rely on and base their immigration policy on, actions taken will have to be adjusted to the particular theory. Nevertheless, from last three decades the phenomena is becoming increasingly important and common which creates a high risk of future conflicts and possible misunderstandings emerging in multi-ethnic, diverse societies (Massey et al., 1993, pp. 431-436). Clarifying and explaining the theories of international migration is of a great importance, however it is only a ground for more empirical research to be done in order to unify all the theories.

1.3. Drivers of international migration and forced displacement

While all the main definitions of migration have been precisely presented and described, a comprehensive review of significant factors influencing population movements and decisions to leave their places of origin should be provided. Migration being a global phenomenon movement is a result of basic factors that either make one perceive migration as an attractive opportunity, those are pull factors, or revolt one from staying at one's place of usual residence, those are push factors (IOM, 2016). These two drivers influencing population movement can also be classified into following four categories presented in the table number 1.1.

Table 1.1 Push and pull factors

Push factors	Pull factors
Economic	
Decline in employment opportunities High unemployment, slow economic growth and productivity. Underdevelopment, poor economic conditions, lack of opportunities for advancement	High economic and technological advancement Opportunities for employment, higher wages Improved working conditions, opportunities for development and advancement.
Socio-cultural	
Active prosecution on religious, ethnic or racial background.	Principles of indisputable tolerance.
Environmental	
Adverse physical conditions such as drought, flooding, lack of natural resources.	Lower or no risk from natural hazards. Attractive environments such as coastal or mountain areas, landscapes.
Political	
Wars, perceptions of violence, general lack of security and safety.	Political stability

Push and pull factors theory influences motivational behaviour, which includes preferences, needs and choice of destination. That is the reason why the theory is considered to shape two processes namely mobility to a specific place of destination and migration in general. However, research on the factors influencing migration comes with some serious limitations. This framework gives an insightful presentation on reasons prompting migration flow, yet it omits the difference in individuals responses to migration. In other words, the framework of push and pull factors fails to provide explanation based on complex reality of human mobility as people tend to react to differently to the same drivers. Moreover, push and pull theory does not take under consideration the interaction between conditions in place of destination and place of origin for example people's aspirations and circumstances taking place during the migration. Those factors make a significant difference while analysing population movement. In those terms, push and pull framework fails to explain the complexity of migration as a socio-economic phenomenon [IOM, The Push and Pull Factors of Asylum-Related Migration, 2016]. Even though migration research has been conducted for many decades, investigating the factors and drivers of people movement is now becoming one of the most important topics due to the surge of irregular arrivals of migrants and refugees in 2015's Migrant Crisis, when the arrival of refugees reached staggering levels. This sudden drastic rise in the flow prompted and dominated political debate. The increased attention of politicians and media in the topic was met with more injections of research funding and greater efforts to fully understand the factors impacting migration. In 2018 Joint Research Centre published a quantitative assessment of factors shaping migration – "International Migration Drivers" presenting the outcomes of two-year long study. Review's main aim was to provide evidence-based scientific support for policy making process in European Union (Horwood, Forin, Frouws, 2018, pp. 78-80). Overall, the report, based on many findings, highlights that key factors of migration are structural: migrant's social networks, demographic changes, geographical position and economic development of countries of origin. What's more, these variables are connected and reflect stages of socio-economic development, where factors such as cultural and geographical distance between countries, education level and GDP instability are not so common drivers and reasons of migration (Migali et al., 2018).

In reference to that research Mixed Migration Centre created a survey among migrants studying the reasons for their movement, which results are presented on Figure 1.2. Collected data confirms the economic factors being the main driver of migration, however it does highlight the importance of wide range of factors that have a significant impact, such as: lack of rights, political issues, violence, lack of stability and safety and personal circumstances.

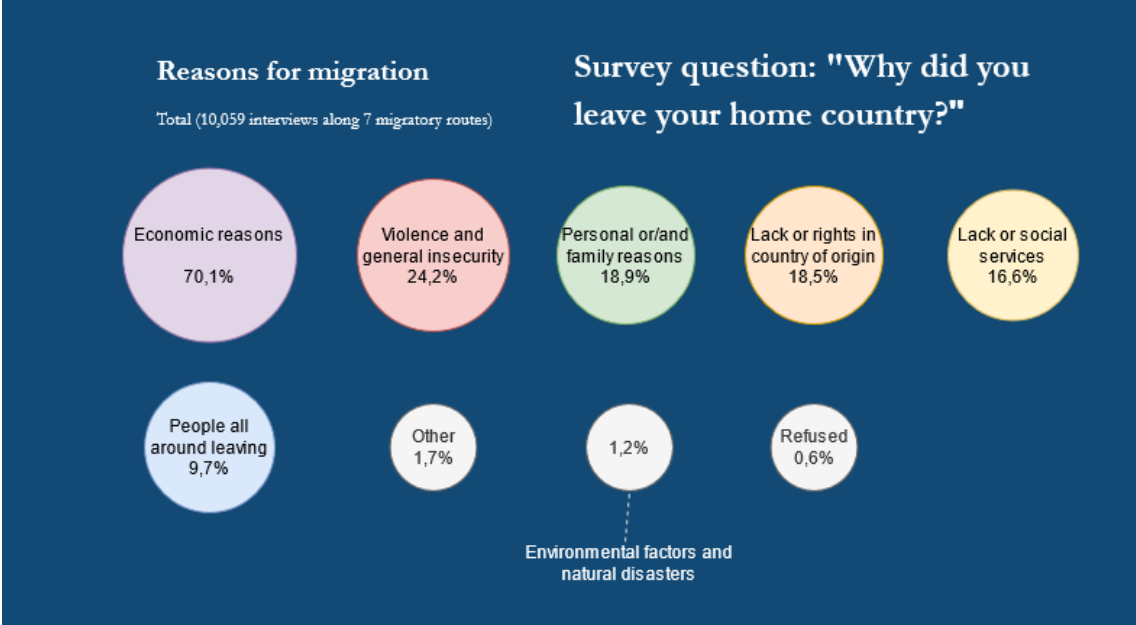


Figure 1.2 Reasons for migration.

Source: Horwood C., Forin R., Frouws, B.: Mixed Migration Review 2018. Highlights. Interviews. Essays. Data. Geneva: Mixed Migration Centre, 2018

According to most of the research, the main factors having the greatest influence on migration are economic ones, they are related to the general condition of country's economy and its labour standards (Kainth, 2009, pp. 82-116). As shown in Table 1.1 economic push factors concern mainly people from developing countries meaning countries with poor economic condition, underdevelopment, high unemployment rates, agricultural unemployment and low agricultural income which are considered to be the main factors pushing people away from their place of origin to developed, more prosperous countries with greater opportunities for employment. However, there are other significant factors influencing migration: population pressure, which results in high man-land ratio and is considered to be a cause of rural out migration and poverty and no alternative sources of income in rural area available (Thet, 2014). What's more technological development is considered to affect and, to some extent, increase the circular migration, which in outcome can have a positive development result. Moreover, economic migrants have some sort of privilege when it comes to choosing the place of destination in comparison to refugees or humanitarian migrants as their main motivation is to find themselves in a country with stable political situation regardless of the economic conditions. In those terms, pull factors are influencing mostly the decisions of economic migrants. However studying the present, continued and rapid economic growth of low- and middle-income countries and slowing

development of high-income countries the migration flow may decline or change (Kainth, 2009, pp. 82-116).

Socio-cultural factors include active prosecution on religious, ethnic or racial background, lack of freedom of speech, right to a fair trial, protection of physical integrity, right to education and protection against enslavement. These factors have an important impact on decision making process among migrants, who come from countries with human rights violations. Humanitarian migrants are more likely to settle in a country with more liberal approach and established human rights. Possibly, migrants would move to the nearest country that meets their requirements, however they may move further, into a country providing a wider range of legal rights for refugees and asylum seekers (Factors Influencing Migration and Population Movements – Part 1, [date of access: 20.04.2021]).

Environmental factors that include adverse physical conditions such as drought, flooding, lack of natural resources, are not considered to be main drivers of migration. There is however some confusion caused by the term climate refugees are defined “people who have to leave their habitats immediately or in the near future, because of sudden or gradual alterations in their natural environment related to at least one of three impacts of climate change: sea-level rise, extreme weather events, and drought and water scarcity” as it does not stand in refugee law and many humanitarian organisations often use the term ‘environmental migrants instead. Environmental factors may soon become one of the more important drivers pushing people to migrate to a different country as climate change may become more noticeable in next decades. Those changes in migration flow will impact social, economic and political dynamics as it will only create more multi-ethnic and diverse societies. People working in various sectors affected by climate change may have to find alternative forms of employment, and many other factors will cause economic changes. State will be forced to increase its efforts in order to ensure welfare and stability for all as impacts of climate change will be most noticeable in developing countries, which are not fully adapted and prepared to environment changes. At this point in time some substantial measures should be taken into consideration by governments (Future directions, [date of access: 20.04.2021]).

Political factors are one the main drivers of migration as apart to economic factors, the political ones make people move to another country as wars, perceptions of violence, general lack of security and safety are the predominant political drivers. State persecution involves the harassment, torture and discrimination of people disagreeing with their government, have minority religious beliefs or ethnic backgrounds. Those people are forced to leave their homes. Asylum seekers search for a more democratic country in reference to their country of state oppressive politics. Moreover state persecution is a result of lack of political rights, liberties, and corruption. There is also a strong relationship between economic condition of country and its political situation. If the political situation is hostile, the economic situation tends to be poor. Nevertheless, war remains the main driver of political migration. The future level of migration from these countries is wholly dependent upon the longevity and severity of any conflict that could arise from social grievances. Level of migration from countries with poor political situation hugely depends

on longevity and the course of any present and future conflicts (Future directions, [date of access: 20.04.2021]).

Push and pull factors studied in this chapter have a great influence on population movement, what's more many of them are related and impact one another. Even though they provide an in-depth analysis of the phenomena they still vary in certain conditions as migrants decision are never static because of people being a heterogeneous group. Push and pull factors provide a general explanation of drivers prompting decisions, however they do fail to include and explain the human factor, for example migrant's age, lifecycle, status, gender, beliefs, education and skill levels. Any other framework of drivers of population movement should therefore take into account such heterogeneity as factors influencing migrants decisions tend to change along migration trajectory, mainly in long journeys when people are exposed to a great deal of risks and threats (IOM, 2016).

1.4. The effects of migration policies on migration flows

The main concepts as well as drivers of population movement have been thoroughly studied and explained in the previous sections, however apart from various economic, political, social and environmental factors influencing migration, another important aspect should be taken into account namely the migration policies.

Migration policies are usually established by governments relying on migration theories, health of their country's economy and social factors. In order to fully comprehend the term, a definition should be provided. In reference to international migration and displacement being transnational concerns, understanding its key trends is crucial due to increased attention in the topic in political debates (United Nations, Department of Economic and Social Affairs, Population Division, 2017). For this reason in 2015, International Organization for Migration (IOM) developed a Migration Governance Framework in order to explain and properly define the term 'migration policy' on the national level (IOM, [date of access: 20.04.2021]). Progress has been made and whereas the term Migration policy is not fully defined but still widely used, it is now a part of migration governance, which IOM defines as: "The combined frameworks of legal norms, laws and regulations, policies and traditions as well as organizational structures (sub-national, national, regional and international) and the relevant processes that shape and regulate States' approaches with regard to migration in all its forms, addressing rights and responsibilities and promoting international cooperation." Migration governance defined as above takes three aspects into account: the substantive level including migration policies, principles and measures, the institutional set-up and procedural level (Melde et al., 2019, pp. 1-15). The definition of migration created by Bjerre (United Nations, Department of Economic and Social Affairs, Population Division, 2017) was as follows: "... a government's statements of what it intends to do or not do (including laws, regulations, decisions or orders) in regards to the selection, admission, settlement and deportation of foreign citizens residing in the country". However the IOM's Migration Governance Framework defines it as "law and policy affecting the movement of people" and includes policy on "travel and temporary mobility, immigration, emigration, nationality, labour

markets, economic and social development, industry, commerce, social cohesion, social services, health, education, law enforcement, foreign policy, trade and humanitarian issues". Migration Governance Program by using planned and well-managed migration policies provides the basic and significant elements to facilitate regular, safe and responsible but mostly orderly migration (IOM, 2016). Framework consists of 3 principles and objectives.

Main aim of developed principles is to form a well-managed migration by proposing and creating appropriate conditions for migration to be profitable. Countries are obliged to protect, respect and execute migrants rights, regardless of their country of origin, level of education, status without discrimination. Moreover, principles highlight the importance of establishing and ensuring whether the migration governance requirements are followed. Second principle refers to migration policies and their requirements. Basing on the research made and data collected, countries would study and understand migration trends hence be able to create suitable policies, reflecting the findings of research. The last principle refers to partnership and cooperation between countries in their efforts to comprehend the phenomena of migration.

The main assumptions of the framework consist of 3 principles and objectives presented on Figure 1.3 below.

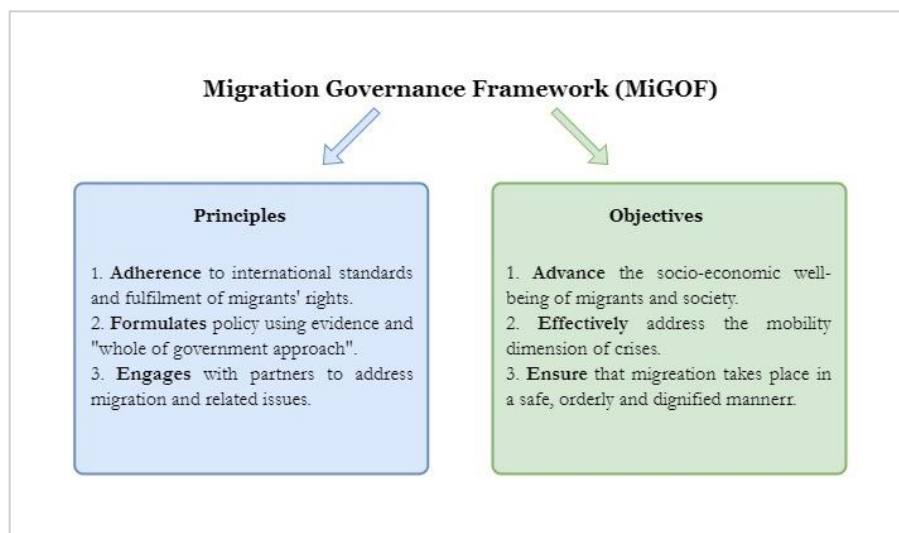


Figure 1.3 Migration Governance Framework main assumptions
Source: International Organisation for Migration: Migration Governance Framework. IOM, 2020.

Whereas, the objectives main focus is put on the needs and rights of migrants and whether they are fully responded and considered. Objectives were established in order to ensure migrants possess the access to economic and social opportunities as well as any assistance needed. Migration Governance is to advance the socioeconomic situation of migrants, by reducing the drivers of forced migration through creating an opportunity for migrants to make a choice between leaving or staying themselves. Second objective refers to governments response to mobility crisis. Countries are ought to be prepared and make efforts to prevent any possible future crisis. Ensuring the migration takes place in orderly and safe way is the third and last objective of MGF. It involves boosting effectiveness and strengthening health strategies in order to protect health conditions of migrants as well as societies in which they live. The importance of

detecting irregular migration as well as banning it is highlighted in this objective. Most important various international humanitarian organizations with cooperation from national and justice institutions should all prevent and act against smuggling, illegal people trafficking and other criminal activities (IOM, 2016).

Migration Governance Framework focuses on six main aspects (IOM, [date of access: 20.04.2021]):

- Migrant's Rights are indicators determining to what extent migrants possess the same access to social care, education and health comparing to native citizens as well as their rights to citizenship, employment opportunities and residency.
- Government approach focuses on legal and institutional frameworks connected to migration policies, it also analyses which governments collect and later use migration data.
- Partnerships describe the cooperation between countries as well as with non-governmental organisations on migration issues. This particular cooperation is essential as it's establishing new standards, increasing dialogue and creating structures in order to overcome new obstacles and problems.
- Well-being of migrants focuses on the welfare of migrants, taking into account education of migrants, their qualifications, student migration as well as labour agreements between countries.
- Mobility dimensions of crises studies whether countries are well-prepared for increased human mobility influenced by wide range of crises from political to environment ones. The main issue studied is measuring whether migrants have the same access to humanitarian help as the citizens of the country.
- Safe, orderly and dignified migration indicator studies the legal aspects of migration through analysing the control policies, admission criteria for citizenship, what's more important makes immense efforts in order to hold back smuggling, human trafficking. Moreover it focuses on helping migrants to integrate.

In order to measure the overall effectiveness of the established policies as well as its direction, several indexes have been produced. Created indexes that involve performing a qualitative analysis serve the aim of evaluating whether policies do fulfil its purpose as liberal or restrictive turn affects the migration in a certain, founded way. Since many years, a great deal of indexes have been produced, each one different from one another.

DEMIG index, created in 2016, storing policy changes in 45 countries, assesses whether given policy measure tends to create a restrictive or more liberal change under the certain legal order. Each change in policies are assess under various aspects such as policy area, migrant group, migrant origin and policy tool such as recruitment agencies and work permits (DEMIG Policy data, [date of access: 21.04.2021]). Index focuses mostly on policy change, namely whether changes in flows, stocks and composition come after (Scipioni, Urso, 2018, pp. 14-40).

ICI (Immigrants' Climate Index) index, created in 2014 covering only United States, is a measure of the regulatory climate for immigrants. Climate is described by the authors as "the regulatory environment that immigrants experience in their everyday lives, as a result of the laws enacted by individual states to either benefit or restrict the immigrants within their jurisdiction" (IMI, [date of access: 21.04.2021]). Policies have been classified into four different categories taking under consideration its geographic reach and whether it causes positive change or restriction. Category number 4 includes laws related to law enforcement as it impacts deportation or detention of migrants. Third category includes law having an effect on crucial aspects of immigrants life, that is laws that refer to employment, identification or obtaining housing. Second category includes policies affecting the access of migrants to obtaining certain work licenses or job position. Moreover it includes laws that affect the possibility of migrants to benefit from government social programs, healthcare and education. The last category refers to laws allowing the immigrants to vote or access legal services (The Immigrant Climate Index, [date of access: 21.04.2021]).

IMPALA (The International Migration Policy And Law Analysis) indicator is said to represent the ultimate procedure of migrant admission into country. The main aim of the project is to measure and classify entry traces connected to five categories, namely: family reunification, economic migration, humanitarian and asylum migration, student migration and lastly, acquisition of citizenship. Authors chose more general categories as while analysing sub-categories from various countries significant differences in the definition of many issues were discovered, that would have a great impact on obtained data (Scipioni, Urso, 2018, pp. 14-40).

IMPIC (Immigration Policies in Comparison) covers 33 OECD countries. The aim of the project is to provide a set of quantitative data allowing to measure the policies in OECD countries. The database is based on three methodological issues "conceptualisation, measurement, and aggregation". Conceptualisation involves defining the immigration policies, measurement presents the certain method in which items were collected and coded, types of sources used. Lastly, indicators allow for aggregation on various levels (Scipioni, Urso, 2018, pp. 14-40).

MGI (Migration Governance Index) is the only index involving institutional variables, focusing mostly whether the developed and implemented policies are effective. Its main aim is to help countries assess the effectiveness of their migration policies as well as the areas in which policies fail and require more development. Another purpose of MGI is to explain and clarify the term "well-governed migration" (Melde et al., 2019, pp. 1-15). Nature of the policy is one of the features operated by indexes as it questions whether policies enhance or restrict migrant's rights at the same time measuring the effectiveness the developed policies as well as their outputs and outcomes (Scipioni, Urso, 2018, pp. 14-40).

MIPEX (Migrant Integration Policy Index) has three main aims: providing a migration policy comparisons throughout time, observing changes in integration process by monitoring changes in policies and lastly, evaluations. MIPEX is the only index that includes all 28 EU member states, whereas it does not cover all areas of immigration (Scipioni, Urso, 2018, pp. 14-40).

Cerna's Index targets highly-skilled immigrants and at the same time measures to what extent country's policy is restrictive or open. Index is divided into admission mechanisms and permits to

work (Scipioni, Urso, 2018, pp. 14-40). This index can be compared to DEMIG approach, however Cerna's approach has definitely a smaller geographical and thematic scope (United Nations, Department of Economic and Social Affairs, Population Division, 2017).

Migration policies indexes concern a wide range of significant fields, geographical scope, various time periods and countries (Migration policies and governance, [date of access: 20.04.2021]). There are few distinctions operated by those indexes, the first and most important one concerns whether the policy enhances or restricts the migrants' rights. Another distinction in policies are their outputs, such as migration law adaption, and outcomes, which are impacts of those adapted laws (Scipioni, Urso, 2018, pp. 14-40). Migration indexes vary depending on the migration policy definition they apply, methodology, aggregations and cover different time periods. Fact should be emphasised that indexes are not applied in order to measure the implementation of policies, indexes provide only descriptions of the implemented laws concerning irregular migration however, they do not provide information whether those policies are enforced (UN, Population Division, 2017).

Well-constructed policies, adjusted to State's migration situation can contribute to economic development and growth and well-being of migrants. Implementation of appropriate policies allows the overall impact of immigration to be positive in both countries – the place of origin and place of destination. Many countries lay emphasis on developing policies in order to provide safe, regular and orderly migration taking into account migration, demographic as well as labour market trends. Available data concerning highly-skilled migration highlights the preference of most countries to subject this specific kind of migrants to fewer admission restrictions, employment conditions and length of residence comparing to low-skilled migrants. Another important issue taken under consideration while creating policies is enabling family reunification for migrants, consistent with their right to family life and putting children's sake first. However, besides developing policies concerning the most common migrants problems, governments face a challenge of creating laws determining the rights of irregular migrants. Many countries have started to transform their current policies in order to enable irregular migrants to go back home. What's more governments established many laws affecting those forcibly displaced and most of them ratified the measures for protecting international refugees and asylum seekers (UN, 2020). Nevertheless, the policies developed by States are based on various underlying reasons that would in future bring benefit to the country of destination. Policies are targeted at specified groups of people in such a way that a certain, meeting requirements group of potential migrants is attracted to the possibility of moving to a new country.

Main reasons for States to create this kind of tailored policies is presented on Figure 1.4.

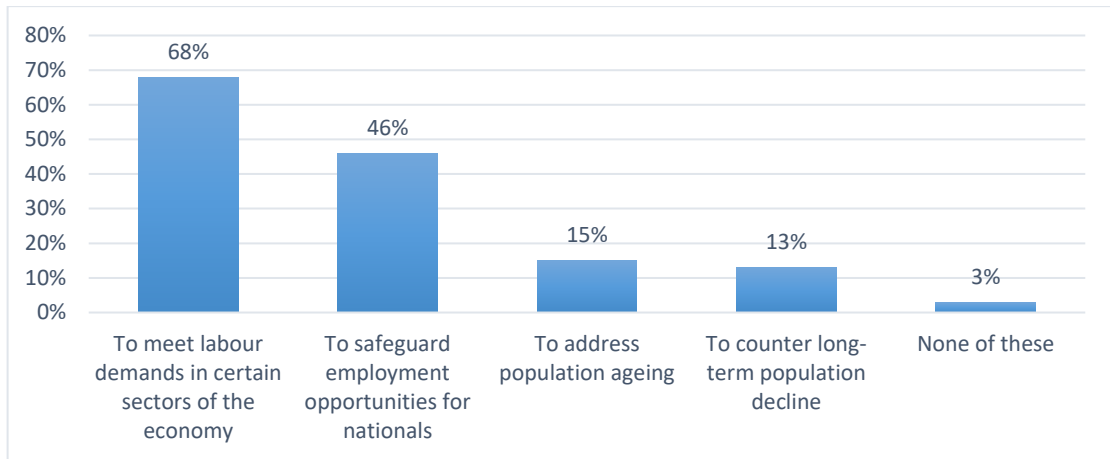


Figure 1.4 Rationale for current immigration policy, 2015. Percentage of Governments. Source: United Nations: International Migration Policies: Data Booklet (ST/ESA/ SER.A/395). Department of Economic and Social Affairs, Population Division, 2017.

Most Governments, namely 68%, point meeting labour demands as the main reason for creating appropriate immigration policies. Whereas 46% of governments safeguard employment opportunities for nationals by creating migration policies. Third and fourth rationale with 15 and 13 percent concern demographic issues, the population decline now underway is not Europe's most spectacular problem, however it remains a serious issue. Migration may play an important role in the population dynamics, however it is unlikely that it can reverse the ongoing trend of population ageing. Currently, this problem is slowly gaining its deserved attention, however it will be of a great significance in upcoming decades (UN, Population Division, 2017).

Most countries tend to maintain the current level of migration as it has positive impact both on country of origin and destination. It plays a significant role in economic development mostly by creating job opportunities and filling labour market shortages. Only in 2016 migrants sent \$429 billion in remittances to countries of origin. Besides significant impact on economy, migration contributes to demographic changes in countries of destination (UN, Population Division, 2017). However, not only is the analysis of rationale for immigration policies worth providing, but also the percentage of Governments that do so, which is presented on Figure 1.5.

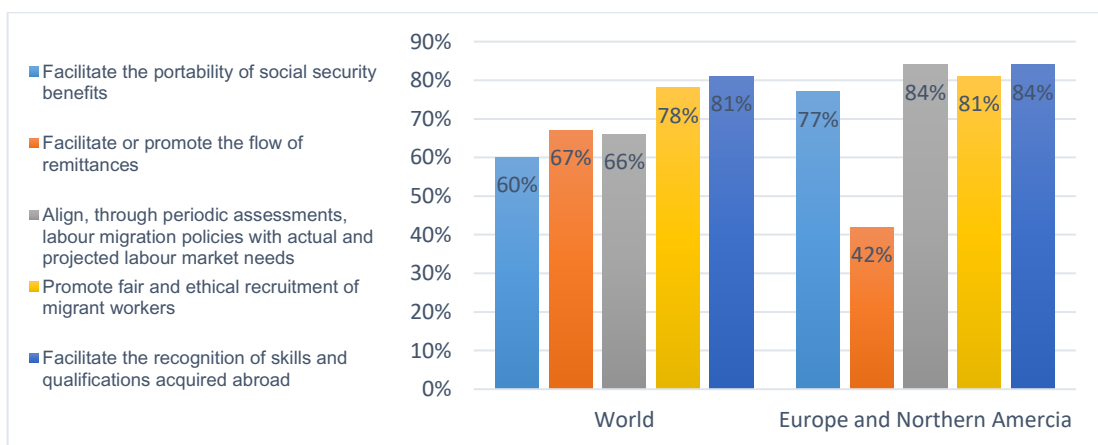


Figure 1.5 Percentage of Governments that reported having policy measures to maximize the positive development impact of migration and the socioeconomic well-being of migrants, 2019. Source: United Nations: World Population Policies 2019, Department of Economic and Social Affairs, Population Division, 2020

Globally in 2019, 81% of Governments indicated that they had policies 'facilitating the recognition of skills and qualifications acquired abroad', in other words, governments established criteria enabling the recognition of migrants qualifications, skills, education as well as working experience. The approximate number of governments in Europe and Northern America, that is 84%, have indicated to have this particular types of policies implemented in their countries. Policies promoting 'fair and ethical recruitment of migrant workers' were reported to be implemented in 78% of governments globally and 81% of governments in Europe and Northern America. Those policies include taking serious actions against fraudulent and abusive recruitment of employees, illegal wage deductions and abuse of power by employers. When it comes to aligning the labour market shortages and needs with labour market policies, 66% of governments globally have reported to do so, where in Europe and Northern America percentage is higher 84% of governments. Whereas, in most of the cases the percentage of governments establishing policies does not vary significantly as well as high percentage of governments in Europe and Northern America tend to implement policies when it comes to promoting flow of remittances policy only 42% of governments implement it. Remittances play quite a significant role as they allow household with lower income to invest in education or productivity-enhancing assets and overcome liquidity constraints. Globally, 67% of governments indicated that they have are promoting the flow of remittances. Only 60% of governments globally had measures in order to 'facilitate the portability of social security benefits', in Europe and Northern America the number was equal to 77%. Meaning that governments have an agreement with at least one country regarding the portability of social security benefit (UN, 2020).

1.5. Migration trends and processes in historical perspective.

Since the earliest times, humanity has been on the move. While migration has a lot of advantages such as: strengthening the labour force, investment and cultural diversity, transfer of skills and financial resources, it brings along corresponding amount of disadvantages and threats such as impact on country's economy, social disharmony, over-population, increased pressure on public services. Today, more people than ever live in a country other than the one in which they were born. Immigration is perceived as the second most important issue facing the European Union, which is now facing the biggest migrant wave since second world war. The displacement of millions of refugees has contributed to the Wars in Syria, Libya and Iraq, severe repression in Eritrea, and spiralling instability across much of the Arab world. In 2017 Europe, right after Asia, hosted the largest number of international migrants - about 78 million, which only stands for legal migration not including irregular migration, refugees and asylum seekers. (UN, 2017).

However, in order to fully understand the migration and its determinants, it is of great importance to present the global view of migration, its beginnings and effects on modern human mobility. Migration may seem as a generally new phenomenon, however that's only an elusive perception as human mobility has existed for centuries. However, couple distinct migration periods have been identified in 1955 by Robin Cohen. Colonization and slavery were the first large movements of people, due to European colonisation of North and South America, people,

especially from Spain, Britain, Germany, France, Netherlands and Portugal, were largely settling in those regions. However, the outcome of that action was both beneficial and disadvantageous as European settlers brought with them many diseases unknown to the native communities that were decimated in the result. The other mass migration of labour, one of the largest, was the slave trade which met the demand for field labour in tobacco and sugar plantations. The slave trading lasted till the 19th century, when slavery was abolished through legislation in Americas, Europe and its colonies.

Migration in Europe was also common in 17th and 18th centuries when religious groups saw mobility as a way to escape persecution or farmers left their land for economic reasons to seek employment in newly emerging industries. Other common phenomena was migration for hunting, agriculture and pastoralism, migration for better security, trade, pilgrimage or escaping natural disasters. Trade has always played a significant role in population movement, seen as possibility to increase wealth, traders travelled across well-established sea routes. Slavery was replaced with another form of labour – indentured labour. Labourers were mostly taken from China and India from 1834 to the First World War, England has indentured labourers to its 19 colonies. At the end of 18th century the political opposition to this particular variation of labour increased rapidly by the Indian nationalist movement. The British government abolished the indenture labour in its colonies in 1917.

Next mass migration has taken place after World War II as people were fleeing from countries plunged in war, or were forcefully moved from their countries of origin. However, until the 1945 people from European countries were mostly emigrating whereas after the colonial times and wars the economic boom followed. During the reconstruction of European countries devastated by war actions, labour migration was in demand to serve the economic boom (A history of migration, [date of access: 30.04.2021]). In that time the North-Western Europe economy was booming only between 1953 and 1958 industrial production increased by 30%. The education level amongst natives has risen as well as opportunities for well-paid jobs. According to this the natives were no longer willing to fulfil the less paid job vacancies providing only poor working conditions such as jobs in cleaning, services, agriculture. European countries met their labour demand mostly through bilateral agreements in countries such as: Spain, Italy, Portugal, Yugoslavia later in Tunisia, Algeria, Morocco and Turkey (Fassmann, Rainer, 1992, pp. 457-480). Migrants from former colonies began their search for jobs in European countries, the ones from colonies in South Asia and Caribbean came to Britain, whereas France had an increased flow of migrants from their former colonies in North Africa, Germany met their labour demand by employing immigrants from Turkey. The job positions initially were supposed to be temporary and migrants were described as ‘guest workers’ living in the country only by gaining temporary visas, however with time many of immigrants settled in their countries of destination (A history of migration, [date of access: 30.04.2021]).

At that point in time migration was seen as a positive phenomenon providing benefits to both countries – the country of origin and destination. For example remittances from migrants had a great influence on the national economy in Turkey as migrants’ monetary return became an

essential part of country's economy, it has even caused an economic destabilization. Moreover, many countries saw human mobility not only as a mean to gain economic benefits but also as a method to fight unemployment, especially in Italy which saw the opportunity to dispose the potential voters of the socialist and communist parties. It is estimated that between 1950s and 1970s number of immigrants that left Greece, Portugal, Spain and Italy varies between 7 to 10 million (Garcés-Mascareñas, Penninx, 2016, pp. 31-55).

The numbers have changed substantially at the beginning of 1970s as one in four industrial workers in France, Belgium and Switzerland were immigrants, same situation was seen in Britain where the ratio between immigrant and native physical workers was equal one to seven. Moreover, in the 1975 it was estimated that the 85% of total foreign stock was divided between four countries, namely Germany, Switzerland, UK and France (Garcés-Mascareñas, Penninx, 2016, pp. 31-55). Due to increase in foreign workers, immigration has also increased as the effect of family reunification. During the 1970s the range of countries of origin and destination has grown rapidly (A history of migration, [date of access: 30.04.2021]). The net migration flow, which is the difference between the number of immigrants and emigrants throughout the year. Net migration rate occurs when the number of immigrants is higher than the number of emigrants, during the 1970s the net migration was equal to 240,000 on average per year. The net migration flow in European Union throughout the years is presented on Figure 1.6.

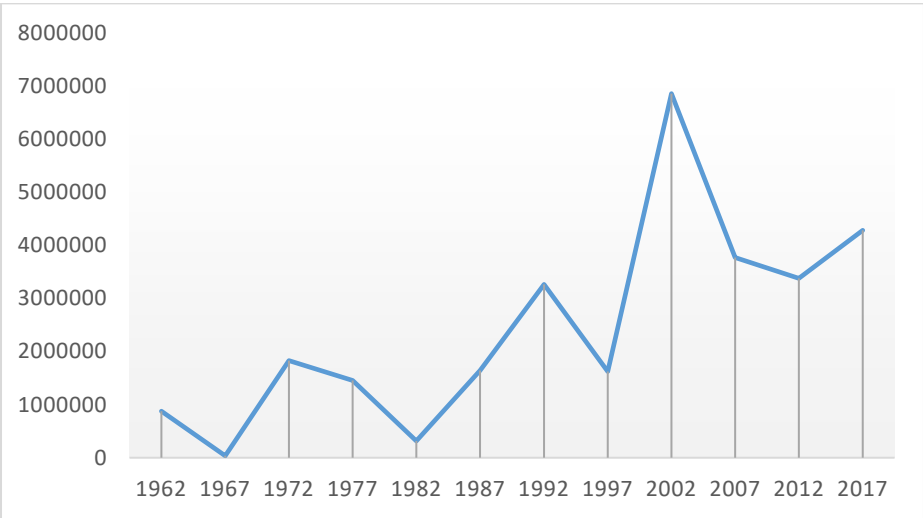


Table 1.6 Net migration in European Union in years 1962-2017.
 Source: Own calculations based on data from Eurostat.

However, the oil crisis that took place in 1973 had a significant impact on migration, as it sharply reduced the labour demand. Many main migration countries such as Switzerland, Germany, France and Sweden invoked a migration stop. Policies established in order to reduce migration in outcome didn't stop migration but reduced and transformed it. Number of migrants kept rising due to the transformation of migration policies from circular to chain migration. Not only has the number of migrants changed in this time period, but also the sole structure of migrants' population has changed as the share of non-European migrant population has grown significantly, for example in Sweden in 1970 7.6% of the foreign born were non-European, whereas in 1999 the number has increased and equalled 40% (Garcés-Mascareñas, Penninx, 2016, pp. 31-55).

However, starting from 1990s patterns of migration have significantly changed due to many events that took place in that period of time, starting from the fall of the Iron Curtain which was followed by opening many borders of Eastern Europe, the end of the Cold War and armed conflicts in former Yugoslavia which resulted in an increase in asylum seekers who mainly emigrated to Western Europe. Between 1989 and 1992 asylum applications raised dramatically, main countries of migrants' origin were Romania, Iraq, Turkey, Afghanistan and the Federal Republic of Yugoslavia. Later, between the years of 2002 and 2006 asylum applications have decreased only to increase again after the conflicts in Iraq and Afghanistan. The change in number of asylum applications is presented on Figure 1.7 (Garcés-Mascareñas, Penninx, 2016, pp. 31-55).

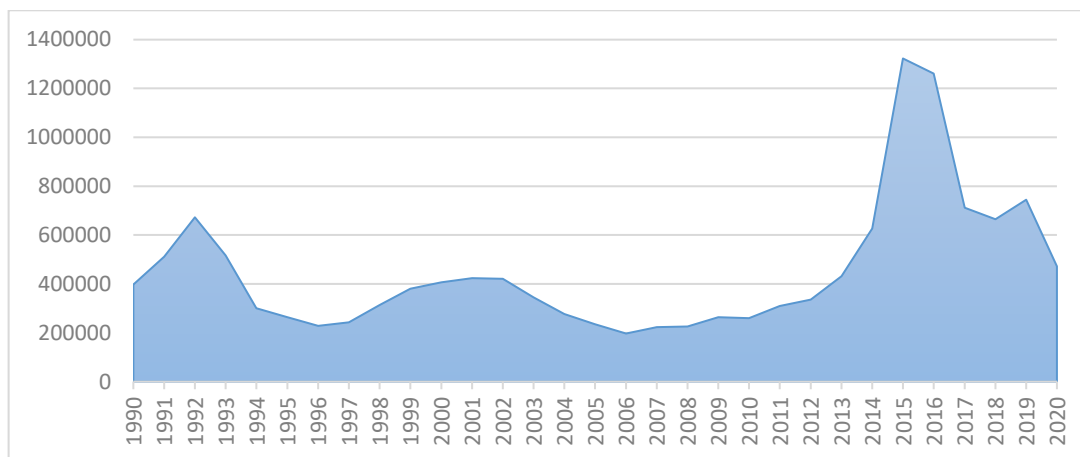


Table 1.7 Asylum applications in the EU between 1990 and 2020.
Source: Own calculations based on data from Eurostat (migr_asyapp).

Next significant and rapid rise in the number of immigrants was the 2015's Europe's refugee crisis. Such tremendous amount of people movement was caused by several events - the rise of ISIS, the Syrian civil war, instability in Afghanistan and the Middle East. By the end of 2014 around 220,000 asylum seekers arrived on Greece's and Italy's shores, which was already a record itself, however one year later that number rose to 1,000,000. Whereas, people were mostly forcefully displaced this population movement had also an economic background. As for Syrians, which were one of the largest immigrants groups, gaining legal entrance to the Arab countries was nearly impossible, they had to flee to Turkey, Jordan and Lebanon. However, the situation of Syrians in Turkey was challenging as they didn't have the right to work and their children have fallen out of education system, making the Europe an attractive destination. Refugees that landed in Italy or Greece didn't mean to stay there permanently, Germany was their main destination of as there they could be given better living conditions and more job opportunities. The most effective way of immigrants to travel to Germany was to land in Italy as in that way the refugees did not leave the European Union. The second, and perhaps the most important, reason for refugees to travel mostly to Germany was its announcement of accepting any asylum seeker that applied for it in any European Union country. As an outcome enormous amounts of refugees arrived to European Union without fear of getting arrested. Situation worsened as Balkans countries such as Serbia, Macedonia, Croatia and Greece made the

journey significantly easier by ensuring a special transport, making the long route to Germany undeniably less difficult and faster. Where at the beginning refugees were mostly Syrians, later as the situation in Afghanistan began to worsen, a high percentage of asylum seekers were Afghanistan. After 2015 number of asylum seekers started to decline, however it still remained high in comparison to the numbers from previous periods. To high extent the migration was reduced as an effect of measures undertaken by European Union such as agreement between EU and Turkey which main aim was to stop the flow of irregular migration via Turkey to Europe. Agreement did not improve the situation significantly as it has placed a disproportionate burden on Greece, which was burdened with most of the refugees arrivals. Another measure taken by Europe was the construction of 1,000 km border walls in Balkans. Ten member states have decided to build such border stretching from Spain to Latvia. Moreover, crossing that wall resulted in getting a three year prison sentence. The last measure was the agreement between Italy and Libya, which stated that Italian forces would train, finance and equip Libyan coastguard so that they would stop migrant boats at sea and send the passengers back to their country of origin. After 2016 arrangements and EU actions number of refugee arrivals has noticeably declined, however migrants still land on Italy's and Greece's shores hoping they manage to travel all the way to Germany (Guardian, [date of access: 30.04.2021]). Meanwhile, the amount of arrivals may have decreased and the issue seems to be resolved but other problems turned up and are worsening every year. Countries such as Italy, France, Germany that have adopted refugees in high amounts are now struggling with conflicts on ethical and religious background, as having not drawn the line of tolerance before the mix of cultures, nationalities and beliefs is getting out of hand for the governments. There are still many migrants in search for a shelter and more prosperous country to live in. Below, Figure 1.8, presents the comparison of number in asylum applications between years 2011 and 2020.

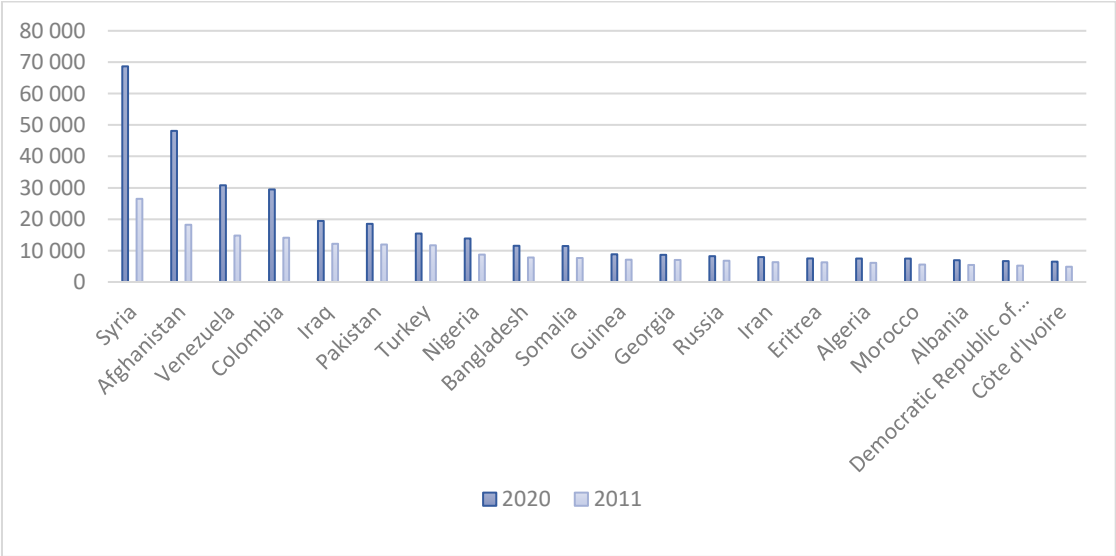


Figure 1.8 Top 20 citizenships of asylum applicants (Non-EU).
 Source: Own calculations based on data from Eurostat (migr_asyapp).

The highest number of asylum applications in 2020, 5 years after the refugee crisis still comes from Syrian and Afghanistan. However new problems have risen as a result more and more refugees from Venezuela and Colombia are looking for shelter in Europe. Available data from 2020 show that approximately 5 million migrants and refugees left Venezuela according to its socio-economic instability, political turmoil and ongoing humanitarian crisis by that starting the largest migration and displacement in Latin America in recent history. Other asylum seekers come from countries plunged in war such as Iraq, Pakistan (IOM, [date of access: 01.05.2021]).

Europe is now at the edge of the breaking point as the number of arrivals from the migrant crisis in 2015 have declined, but refugees from new countries are coming in higher numbers. The integration of refugees and asylum seekers will remain a main topic of political debates during the coming years. The social inclusion of migrant population from developing or underdeveloped countries in developed countries of EU will take a great deal of time. Europe's role as a main destination of refugees is undeniably significant. The rapidly increasing number of displaced population, global refugees, political changes, wars and conflicts causes complex global challenges (Farkas, Dövényi, 2018).

2. SOCIO-ECONOMIC EFFECTS OF INTERNATIONAL MIGRATION – LITERATURE REVIEW.

2.1. Demographic effects and immigration as a solution to demographic concerns.

The European Union has been undergoing a long period of societal and demographic changes. The term 'demographic change' describes " a population's age structure adjusting to changes in living conditions. Consequently, changes in the composition of a society's age structure are the result of social shifts" (Stula, Linz, 2010) . Although population of the EU has been growing considerably, by around a quarter since 1960 (Margaras, 2019), the pace of this grow is becoming too slow for the EU to avoid the decline of its population. The outlined phenomena now underway is not Europe's most spectacular problem, however it still remains one of the most pressing challenges. Problems of demography are likely to have a considerable impact on EU society as the whole phenomena has almost always revealed society's fears concerning vitality, quality or an uncertain future for citizens (Teitelbaum, 2013) . Most of the conducted research on the topic show that as a result of higher life expectancy and lower fertility rates the population of EU will age consistently and is bound to decline in the near future. Assuming birth and death rates will continue, the average age of a person in European Union will be equal to 49 years by the year 2050 (Duch Guillot, 2008) . Although migration is an important factor in population dynamics it is not able to reverse the ageing of population, only ease the problem. Moreover, such a decrease in employers and at the same time taxpayers only deepens the debt of countries, which worsens the situation of already indebted Member States such as Italy (Margaras, 2019). At the beginning of the previous century the population of the EU accounted for 15% of the global population, whereas according to projections, in 2050 it will only account for 5%. To some extension it is caused by the growing number of habitants of countries outside the EU, however it is mainly a result of declining population in Europe (Duch Guillot, 2008).

The impact of rapidly ageing population is going to be a phenomena of great significance in following decades as the shape of current age pyramid is being transformed showing the definite conversion in a direction of an older population structure. Which is a result of a constant decline in the number of people of working age and a fast increase in the proportion of retired population. (Population structure and ageing, [date of access: 09.09.2021]) .

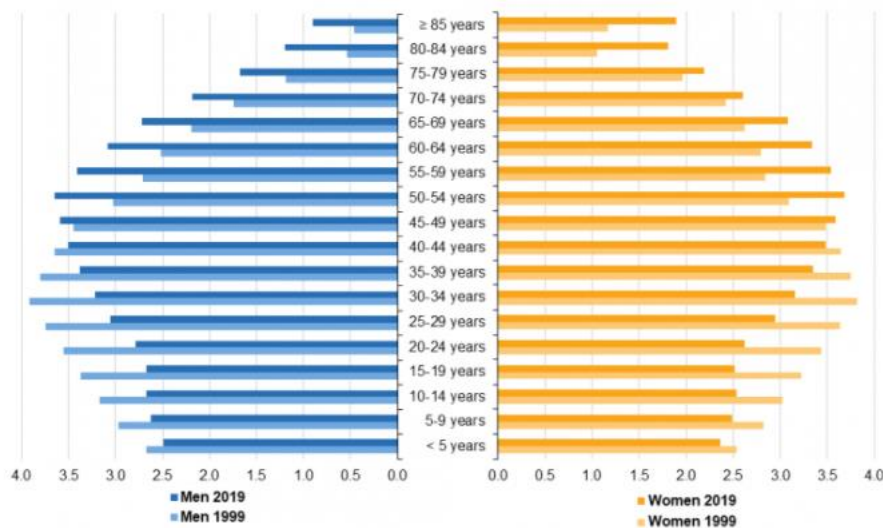


Figure 2.1 Population structure by five-year age group and sex, EU-27, 1999 and 2019
 Source: Being young in Europe today, [date of access: 09.09.2021].

The population of the EU on 1 January 2019 was estimated at 446.8 million, however the number of young people and children in the same year was equivalent to 142 million, that stands for nearly one third of EU's population. These number included 67.8 million children in the age between 0-14 years, which stands for 15,2% share of the whole population, whereas the number of young people in the age of 15-29 years was higher by 6.4 million persons accounting for 16,6% share. In order to present the rapid demographic change in EU it is of high importance to present the comparison in the share values of population between years 1999 and 2019. Firstly, taking under consideration the combined number of children and young people, that means all individuals in the age of 0-29, in 1999 its share of the population was equal to 38.1%, where in 2019 that number has sharply decreased and equalled only 31.8%. In the meantime the share of the elderly population, people aged 65 years or more, however, has significantly increased. In 1999 this share was equal to 15,4% only to rise in the next 20 years to 20,3% (Being young in Europe today, [date of access: 09.09.2021]). This may also be the effect of the baby boom generations slowly moving into retirement.

Figure 2.2 presents the predicted changes in the number of various age group populations between the years 2020 and 2070. It is of great significance analyse a longer period of time in order to visualize the full consequences of trends such as low fertility and mortality rates for population ageing. These demographic changes are here to stay as the presented demographic trends will only deepen, which is visible on the figure 2.2.

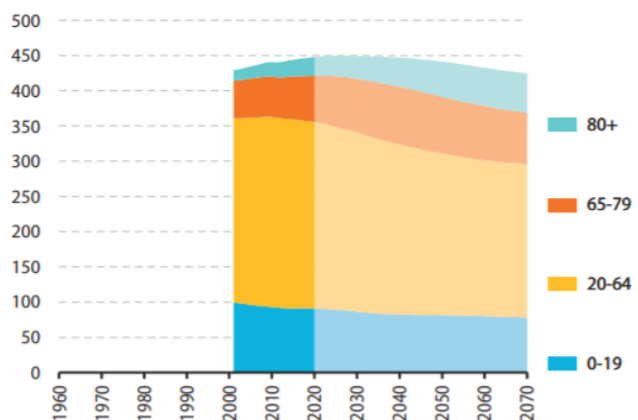


Figure 2.2 Population age structure, age groups (millions).
 Source: Demographic change in the EU, [date of access: 09.09.2021]

According to the analysed predictions, by the year of 2070 the number of children, aged 0-19, will maintain the downward trend and will significantly decrease whereas the number of elderly, individuals aged over 65 years, will have raised dramatically. Undoubtedly, these circumstances will inevitably lead to an increased burden put on young and working age population to provide for the necessary social expenditures needed for the elderly population (Population structure and ageing, [date of access: 09.09.2021]).

The increasing burden put on people of working age is measured by the use of the old age dependency ratio. Age dependency ratios may be used to study the level of support given to younger and/or older persons by the working age population, these ratios are expressed in terms of the relative size of younger and/or older populations compared with the working age population. The old-age dependency ratio is the population of age 65-plus divided by the population of 16-64. The total age dependency ratio is the sum of the youth and old-age ratios. Age Dependency Ratios are often used to measure the financial pressure on the actively working population of a community. The higher the ratio, the greater the burden is carried by working-age people. Lower ratios indicate more people are working who can support the dependent population (Dependency ratio, [date of access: 10.09.2021]) . The values of old age dependency ratio in the European Union between years 1999-2020 are presented on the Figure 2.3 below.

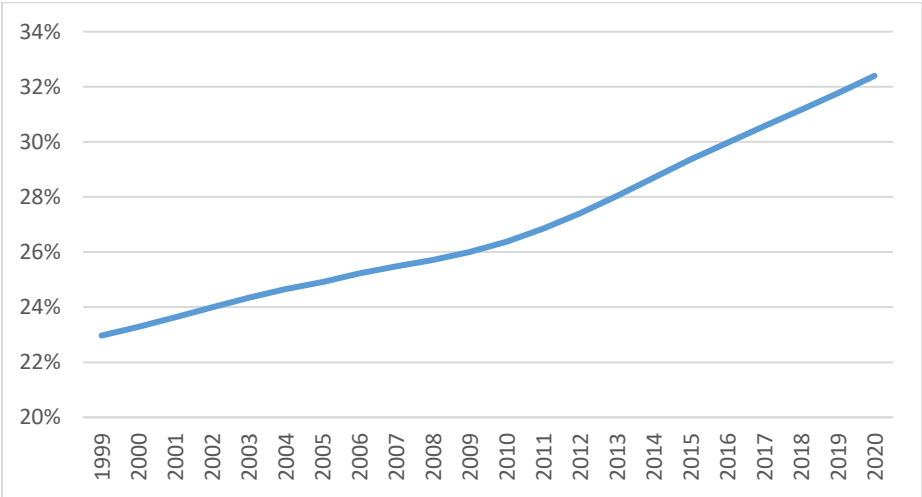


Figure 2.3 Old age dependency ratio (% of working age population) in European Union, 1999-2020.

Source: Data from World Bank (SP.POP.DPND.OL).

The old-age dependency ratio for the EU was equivalent to 32.4% on 1 January 2020 meaning there were over three persons of working age for every person aged 65 or over, which is quite a rapid growth comparing to the amount from two decades ago as in 1999 the ratio was equal to 22,97%. The lower ratio from 1999 shows that the pressure put on young people was lesser than that of now. Taking a closer look on the previously presented data and dependency ratio a conclusion arises that the demography of EU is undoubtedly already undergoing the process of transformation.

The main factors impacting the values of age dependency ratio have been outlined, however they vary across different countries in EU. Figure 2.4 represents the values of the ratio amongst

different European Union countries in the year of 2019. Only the countries with the highest ratio were taken under consideration while creating the graph instead of showing the values of all EU countries.

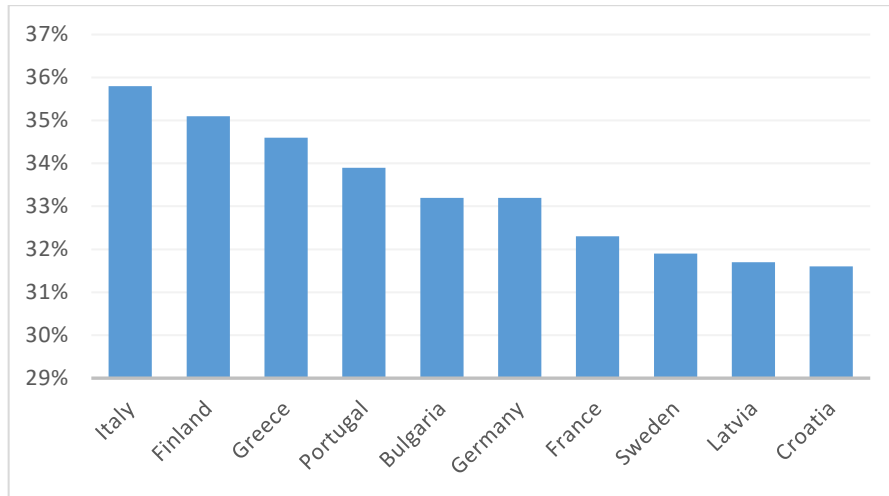


Figure 2.4 Old age dependency ratio amongst different European Union countries in 2019. Source: Own calculations based on the data from Eurostat (DEMO_PJANIND).

The one with the greatest number of people of working age for every person aged 65 or over, was Italy with 35,8%. Meaning that in 2019 almost 4 people were working to sustain the social expenditures for 1 elderly person. All the previously thoroughly described factors influencing the value of the ratio also apply in this case, however to fully comprehend why Italy's ratio is particularly high, a short description of its demography is ought to be explained.

With a population of 60 244 639 at January 1st 2020 according to ISTAT (Italian National Institute of Statistics). Italy takes fourth place by population amongst the European countries. The ageing population is the phenomena across whole country, however the ageing rate, which is the ratio between population aged 0-15 years and population aged over 65 years, is fairly higher in the North than in the South, namely 187,9% and 134,7% (Population: Demographic Situation, Languages and Religions, [date of access: 10.09.2021]). That might be the effect of the internal migrations that took place in the 19th century, after the unification of Italy. After the Second World War, Italy experienced a period of high economic growth which was the direct cause of the internal movements. The new industrialised areas in the north were seen as new, prosperous regions offering employment to the inhabitants of the south immersed in poverty. This disparity between the developed north and backward south contributed to creating a difference in wealth and employment between areas as well as great depopulation of south areas (Larner, 2021, [date pf access:10.09.2021]). This movement is still continued and as unemployment runs significantly high among the young population, the baby boomers are starting to retire causing the country's population to decline.

However, this is not the only cause that influences population issues in Italy as well as in Europe. Another factor that is of great importance for the growth of population is the number of children born in the year. That number, is not surprisingly, sharply decreasing both in Europe and in Italy. It is measured by the fertility rate, which is defined as a proportion of the number of

children born alive by women of that age during a certain year to an average population of women in the same age in the year (Fertility rate, [date of access: 10.09.2021]). The total fertility rate equal to 2.1 constitutes to a replacement level of fertility that means it ensures a widely stable population. Simply put, it's the average number of children per woman enabling the generation to replace itself without taking under consideration migration. A value below the total replacement fertility level will be a cause of the population decline.

Below, the Figure 2.5 represents the values of fertility rate in Europe in the years 2008 to 2019.

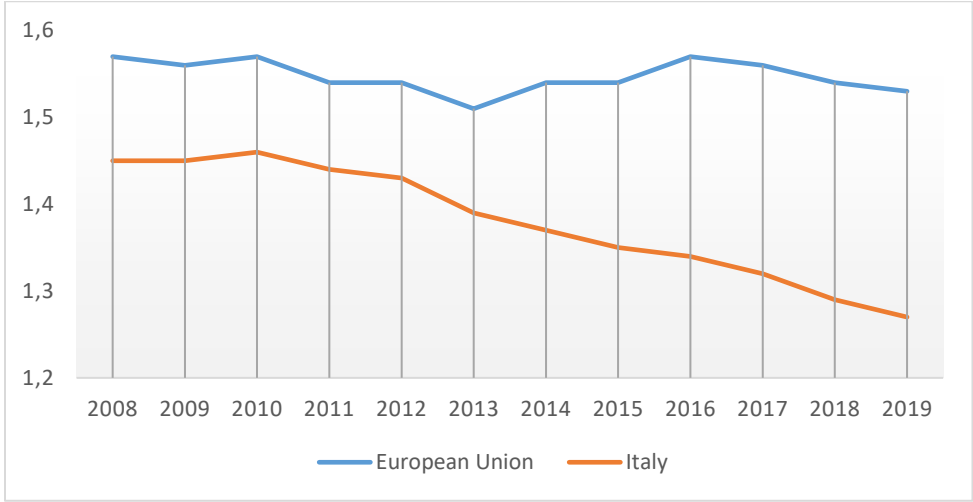


Figure 2.5 Fertility rate in European Union and Italy between years 2008 and 2019. Source: Own calculations based on data from Eurostat (DEMO_FIND).

The total fertility rate in EU in 2019 was equivalent to 1,53 live births per woman. The EU's fertility rate was slowly declining since 2008 until it was followed by a slight decrease to 1,51 in 2013 when it rebounded. In 2016 the rate was equal to 1,57 only to decrease again. Despite the rise in the value of the factor in the year of 2016, the rate is still not satisfactory and is bound to keep its falling trend. What's more, during more time than a decade the value of the rate is quite steady and below the replacement fertility level of 2,1 meaning the population of European Union is not able to replace its annual generations. Same situation occurs in Italy, however the country is dealing with a rapid decrease of the rate since 2010, until when it was quite steady. In 2019, fertility rate in Italy was equivalent to 1,27 comparing to 1,43 from 2010, without a doubt the country is undergoing a sharp population decline.

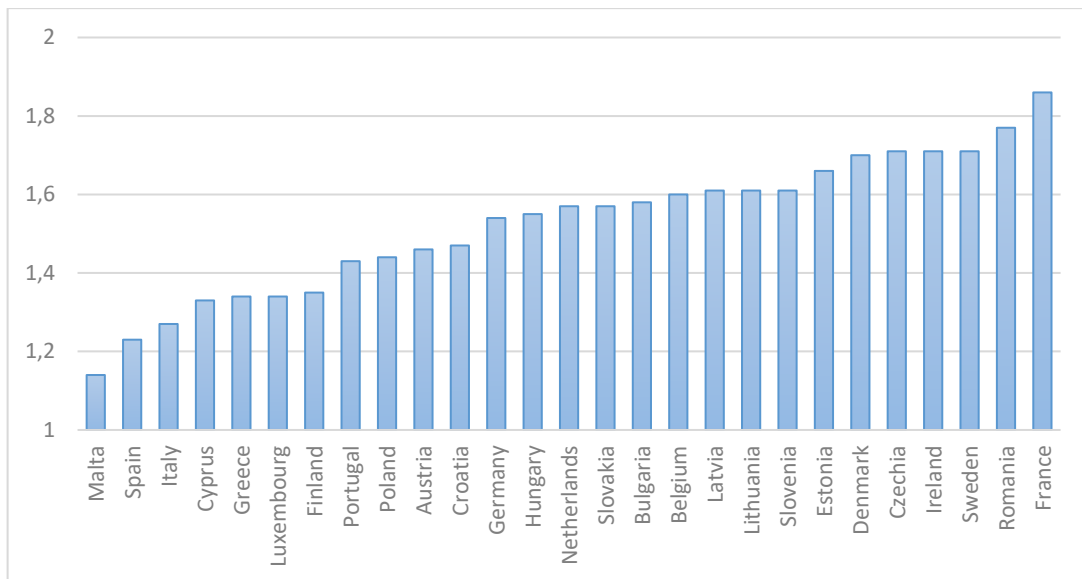


Figure 2.6 Fertility rate amongst European *Union countries in 2019*.
Source: Own calculations based on data from Eurostat (DEMO_FIND).

Figure 2.6 presents the fertility rate amongst European Countries in 2019. None of the countries reaches the replacement fertility level of 2,1, whereas France is close to it with the value equal to 1,86. The lowest value of 1,14 was obtained by Malta, while Italy is third one with the worst rate of 1,27. Having previously explained the demographic situation in Italy, the low fertility rate is one of the main factors of the drastic population decline.

Fertility rate levels are high in Africa, South and Central America and Middle East, however in most developed regions such as Japan, Australia, Canada and Europe the rate is low (Norville, Gomez, Brown, 2003, pp. 1-20) . There are many reasons contributing to a decline in fertility rate values, mostly economic ones but also some significant social causes that cannot be overlooked. Firstly, the cost of raising a child has risen considerably over the last decades. According to Richard's Easterlin relative income theory states that the positive relationship between fertility and income is dependent on couple's potential earning power, material aspiration and socialization experience(religion, education). Pressure put on the couple depends on their relative income. In the case of an increase of income the pressure decreases and parents are not burdened by their children nor does their standard of living worsens. However, when there are not many employment opportunities and a vision of a high income is unreachable couple's tend to have fewer children (Doliger, 2004) .

Social reasons however are mostly connected with one another. Firstly, the change of marriage patterns over the last decades has contributed to the low fertility rates in developed country along with the career aspirations of women. The understanding of marriage, seen as an obligation in the past, has significantly altered and is no longer seen as required or even desired by many young people nowadays. What's more the age of people getting married has also changed as they are more keen to tying the knot when both have already stable jobs, which leads to another reason, namely, the greater number of female employees on labour market, which results in postponing the age for marriage and childbearing. However another factor of high

importance is a decreasing need for young to support elderly parents as a result of a higher life expectancy, which is connected to an improvement of living conditions and enabled access to health care (Doliger, 2004).

The population decline of Europe is impossible to stop, however it can surely be slowed down. As population is ageing and fertility rates are decreasing the only viable solution to those circumstances may be migration. The change in the structure of population will have immense impact on the society and economy for example in the pension system, labour market and labour state. It is estimated that the migration flow could counterbalance Europe's problems.

Migration has a significant impact on demography as it tends to renew the population, since most of migrants are in working age and are willing to find an employment in the country of destination. Figure 2.7 presents the population structure of foreign population living in the European Union in 2019, with the division by five-year age group and sex.

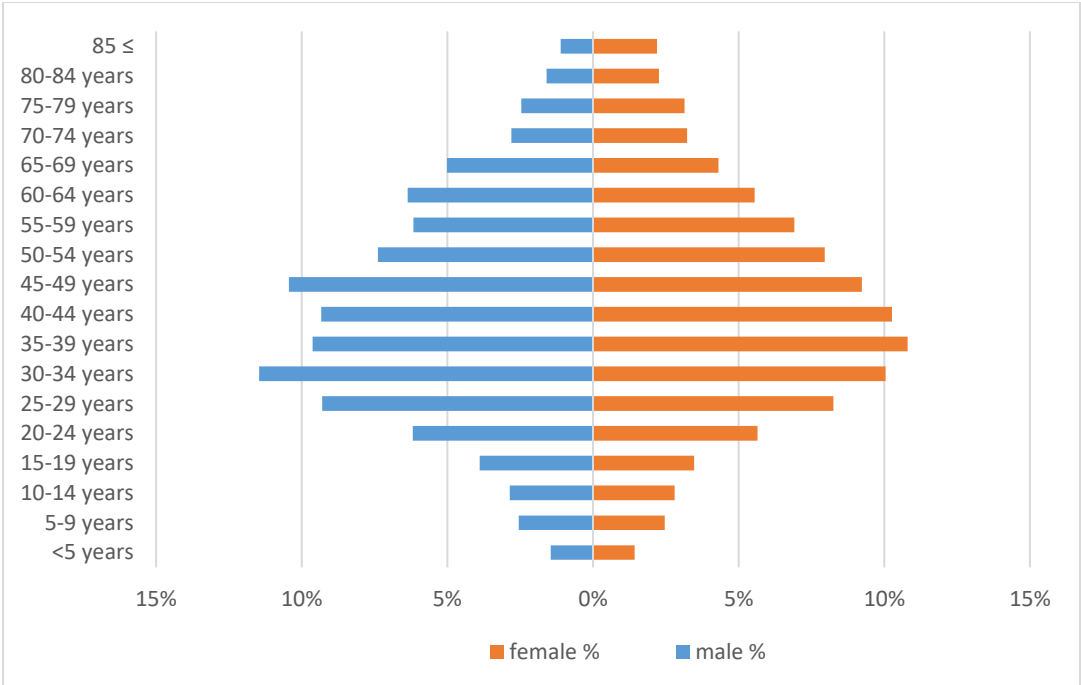


Figure 2.7 Structure of foreign population in EU countries by five-year age group and sex in 2019. Source: Own calculations based on data from Eurostat (migr_pop3ctb).

Looking at the age pyramid it is visible that most of foreign and non-EU population living in European Union is of working age. The share of people aged 20-64 years is equal to 74,67%, which means that most of the migrants are in the proper age to find an employment and, what's more, the age division of migrants might have a significant impact on EU's population and even slow down its ageing process. The population of the EU in 2019 was equal to 446 446 444, where migrants accounted for over 9% of it as 40,2 million foreigners live in EU (Eurostat migr_pop1ctz; migr_imm1ctz). Comparing to 2010 when migrant share corresponded to 6,5% of the EU's population with 32,5 million foreigners living in the EU (Vasileva, 2011). Almost 60% of these migrants come from non-EU countries. However, in Italy migrants constitute for 8,7% of the country's population (Eurostat migr_pop1ctz; migr_imm1ctz). Which contributes for an increase

from 2010 when the share was equal to 6,1% and a very high rise since 2002 with the share of 2,2% (OECD). The free movement between the countries of EU has been one of the key drivers in the rise of foreign population along with the rapid inflow of humanitarian migrants, which escalated after the migrant crisis in 2015. (OECD/European Union, 2015).

The ratio between the number of female and male immigrants is not particularly high. The number of migrants of two sexes is relatively corresponding to one another. Although there is more female aged 70 years or more, the number of male aged 30-34 and 45-49 years is greater than this of women. When it comes to other age groups, the amount of females and males is practically equal. However, if the migration is one of the feasible options for delaying the rapid population decline in EU. Despite migration being an answer to Europe's most pressing issues, it comes with a great number of difficulties and consequences for economic and social sectors.

2.2. Labour market effects of migration.

Countries with low fertility rates, which contribute for mostly developed countries such as all the European Union as was previously stated, are in a great need of an inflow of immigrants if they are to maintain their current level of working age population. They make up for a pillar of the country's economy. Working age population accounts for economy by that for tax revenue, which is used to maintain the living expenditures of elderly as well as their pensions and health care (Duch Guillot, 2008). One of the main and greatest concerns about immigration impact on labour market are its costs and benefits for the receiving country. The biggest fear of the society's concerns is a probable negative impact on employment opportunities in receiving countries (Dustmann, Glitz, Frattini, 2008). Moreover sending countries are also struggling with the loss of labour force and its effects on the economy. However, out-migration is proved to have some positive impact on the per capita income of sending countries as wage growth increases, remittances have a significantly positive impact on the economic development. What's more, residents of sending countries experience an improved employment situation (Guzi, Kahanec, Ulceluse, 2021).

However the consequences of immigration on receiving country's labour market are completely dependent on the skills of resident workers, migrants and the specificity of the receiving country's economy. However, according to Borjas, the extent to which migration will have an impact on employment and wages utterly depends on the level of skills possessed by migrants that are either the substitutes or complements to the skills of resident workers. In the situation where skills of both resident and migrant workers are substitutes an increase in the competition on the labour market will arise at the same time lowering the wages. However, the level of the wage's decrease is related to the quality of substitute, for example if the substitute is closer, the negative effect on the wage will be greater. On the other hand, if the skills of residents and migrants are complementary then in the result the overall productivity increases and leads to rise in the wages of resident workers. Despite many concerns around immigration impact on the labour market, there is a high demand for labour due to lack of supply of native workers (Borjas, 1995, pp. 3-22). What's more, immigration has such a tremendous effect on labour market that

not only can it increase the demand for labour but it can also create new job opportunities. Migrant population expands labour supply by which it also raises the consumer demand for services and goods. This leads to an increased demand for labour and finally results in higher employment and wages.

Where concerns of the immigration impact on employment and wages are ones with the most heated discussions, immigration impacts receiving countries in other, not less significant, way. According to adjustment mechanisms thoroughly described by Dustmann, Frattini and Glitz, the industrial and occupational structure of the labour market may alter as a result of mix of output goods produced by the particular economy (Dustmann, Glitz, Frattini, 2008). In one scenario the immigration of low-skilled workers contributes to expansion of the production of some services, which mostly employ low-skilled labourers. This phenomena causes expansion of the sector and decreases the wages. The second adjustment mechanism focuses on technology. The idea behind it is similar to the first one, however this time the stress is put on the technology used to produce a certain service. For example, the inflow of skilled migrants may result in implementing more advanced technologies, which will affect the labour demand (Ruhs, Vargas-Silva, 2020).

In order to fully understand the impact of immigration on labour market in EU it is significant to put forward some data regarding the employment of immigrants in Member States of European Union. Education of immigrants is the indicator used to measure whether they are skilled. The share of education amongst immigrants in EU is presented on Figure 2.8.

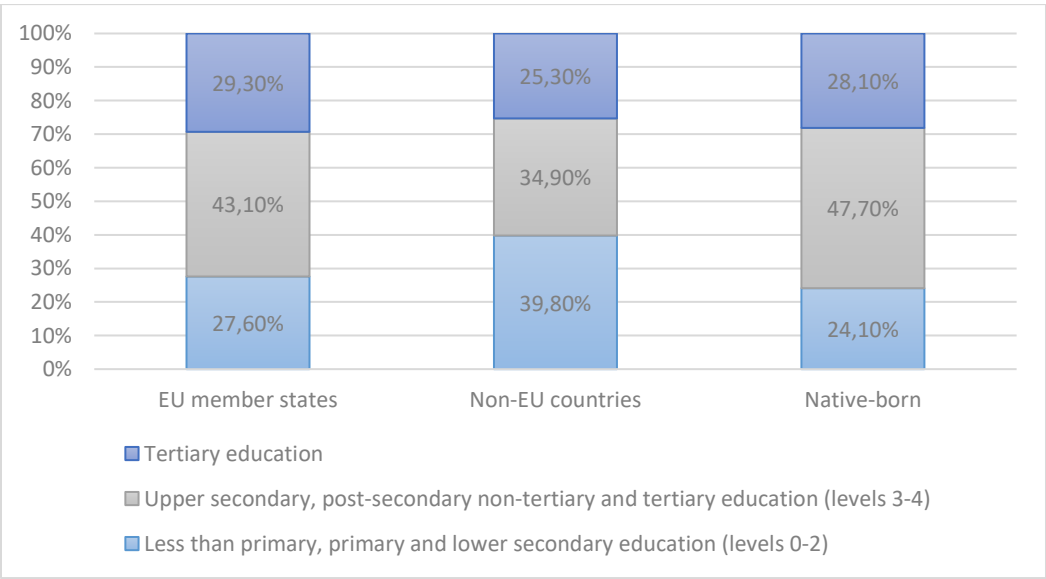


Figure 2.8 Population aged 15-64 years, by educational attainment level and country of birth in 2019. Source: Own calculations based on data from Eurostat (EDAT_LFS_9912).

The share of individuals with education attainment level less than primary, primary and lower secondary education is the highest amongst people from Non-EU countries and equals to almost 40% of them. Whereas at the same time the share of population with this level of education amongst native-born and born in EU is lower than 30%, the lowest amongst native-born population with the share of only 24,10%. Upper secondary, post-secondary non-tertiary and tertiary education share is the highest among native born population accounting for 47,70% of the

population. Amongst people born in EU this share is lower, however not significantly and is equal to 43,10%, whereas people born outside the EU with this level of education attainment account for only 35% of them. The share level of people with tertiary level education is quite the same in all of the three groups. Meaning that almost one third of the EU core working-age population had attained a tertiary level of education.

However, the education attainment level of migrants, as important as it is, is not a steady provider of a secure employment. Immigrants are not equally distributed in the receiving country's economies. The contribution of migrants in employment varies greatly across different countries of EU. The share of migrants workers is the highest in low-skilled occupations of service sectors. For comparison there is only a scarce share of migrant workers in public administration and sectors requiring high-skills, with the exclusion of IT (OECD, 2020).

Migrants are highly present in sectors describes as "activities of households as employers", which in simpler words means the workers employed by households. The share of non-EU citizens in employment sector is presented on Figure 2.9 along with the comparison of employment of EU citizens.

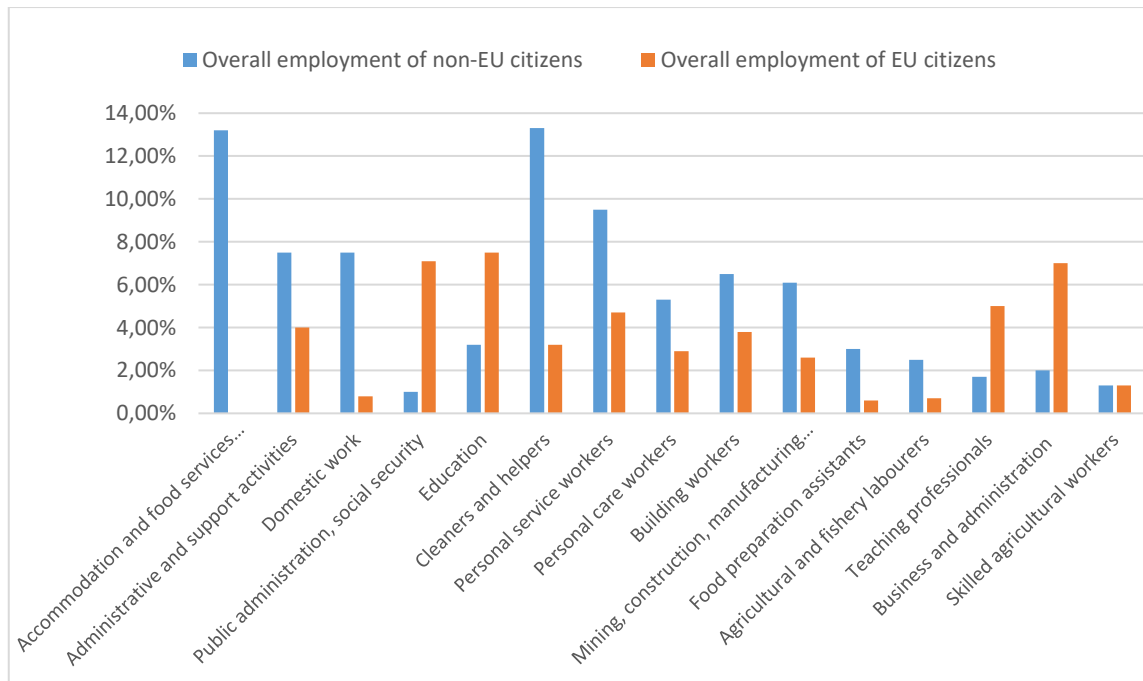


Figure 2.9 Sectors of employment of non-EU citizens and EU citizens in 2019.
Source: Own calculations based on data from Eurostat

Looking at the employment situation the share of employment of non-EU citizens is the highest in employment sectors such as accommodation and food service and service sectors as cleaners and helpers. Non-EU citizens account for the greatest number of physical workers in EU in low-skilled sectors of employment. They contribute to a greatest amount of workers in administration, mining, manufacturing, food preparation. They are mostly personal service, care or building workers and agricultural and fishery labourers. Whereas EU citizens account for the greatest number of employees in high-skilled sectors like business and administration, education, social security and teaching professions. The high demand for non-EU citizens workers in EU

may result in even higher share of these workers in sector of 'household activities' taking under consideration future population ageing and increased need for care takers of elderly.

Migrants constituting for the highest share of workers in low-skilled sector of employment are facing more obstacles while looking for employment than native-born workers. Therefore successful migrant integration in the labour market is the key to not only effectively include migrants in various employment sectors but also society and ensure that they have a positive impact on economy. According to the definition migrant integration is "the process of promoting the values, relations and institutions that enable all people to participate in social, economic and political life on the basis of equality of rights, equity and dignity" (Khan, Combaz, McAslan, 2015) The core aim of migrant integration is to help immigrants to adjust and assimilate to the local conditions, economy, to participate in the community life. The achievement of this goal includes validating educational and professional skills, getting to know the language of the receiving country as well as gaining adequate training. Those main aspects of labour market integration are of great importance for immigrants to understand the certain specifics behind the economy of the country, culture and the employment opportunities. Moreover assessing and validating the skills and qualifications of immigrants is one of the biggest issues concerning immigrant's integration as among non-EU citizens with obtained high education level more than 40% work below their qualification levels. However, when their skills are adequately validated and they are more adjusted to the current environment and society, meaning that they are effectively integrated, migrants have a higher chance of improving the functionality of the labour market and support economical sustainability in receiving country (Integration in the labour market, [date of access: 10.09.2021]) .

Dynamics of migrant integration are also beneficial for EU as they make up for the size of the future labour force. Moreover, in order to lower the dependency ratios all the inflow of immigrants must be followed by effective policies that aim to improve the access to labour market. In other case, high increase in the volume of immigrants can result in creating a poorer situation that that with lower amount of immigrant inflow. (Lutz and others, 2019).

Despite migration integration policies implemented by countries in EU the system mostly fails not only to recognize the skills of migrants and to adjust their work to their level of education but also to provide employment opportunities. Therefore unemployment rates among migrants are significantly higher comparing to native resident workers, which is presented on figure 2.10 below.

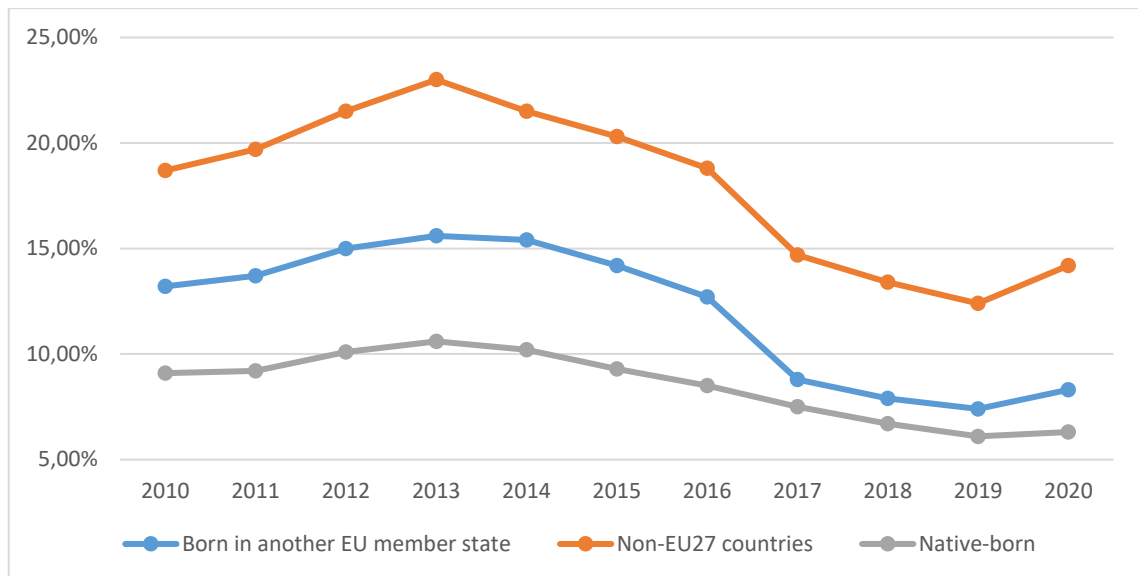


Figure 2.10 Unemployment rates in EU, by country of birth, 2010-2020.
Source: Own calculations based on data from Eurostat (lfsa_urgacob).

In most of the EU's Member States, the unemployment rate was the highest among non-EU citizens. The ratio between unemployment rate of native-born workers and non-EU citizens remained unchanged during 10 years as unemployment of foreigners is twice as big as unemployment amongst native-born. The unemployment rate itself has decreased by around 4 percentage points in both cases and the ratio remained unchanged. That would mean, that besides migrants gaining more employment opportunities than in 2010 the migrant labour market integration does not live up to its assumptions.

If the employment rates of immigrants are higher than those of native-born are the concerns of immigration causing greater unemployment among resident workers valid? According to the Migration Advisory Committee (2018) that analysed 12 studies conducted in the years 2003-2018 immigration has minor or no impact on employment or unemployment of resident workers. However in the case where some impact occurs it tends to have a specific influence on certain groups, specifically low-skilled workers experience negative effects of immigrant presence on the labour market whereas it has a positive effect on high-skilled workers. Dustmann (2005) also stated that immigration has no impact on the employment on native-born population based on the study regarding the overall employment outcomes of UK-born employees. However there was a negative impact of UK native workers with intermediate level of education and a positive effect on workers with higher education level (Ruhs, Vargas-Silva, 2020). Regarding to provided data, if immigration mostly does not have a negative impact on labour market and may even have a positive influence on the employment situation and wages, the question arises. Why are there so many concerns regarding the employment of foreign-born workers? The answer is connected to the social integration of immigrants.

2.3. Social effects of migration

Previously described social integration is one of the key drivers of a successful assimilation of migrants which can be expressed as real possibilities of gaining opportunities in labour market, law and practice, society, education and so on, that are on a similar or at least comparable level to those of native-born citizens (Böhning, Zegers de Beijl, 1995) . However, as the assumption and aim of this process sound very promisingly, the social integration may also have an adverse effect on the migrants' opportunities and their standard of living. As migrants struggle greatly while moving to a new country, mainly with a different culture and beliefs, the integration process, even if supported by various policies, may have a negative outcome and lead to social exclusion.

There is no specific definition of social exclusion as according to the United Nations it is a "multidimensional phenomenon not limited to material deprivation; poverty is an important dimension of exclusion, albeit only one dimension" (United Nations, 2016, pp. 17-31). Although no generally agreed definition has been established, most of the scientific organizations, scholars and governments while describing the phenomenon of social exclusion put an emphasis on the general lack of participation in society. Social exclusion may be defined in many various ways as the exclusion may be based on race, gender, education, employment, citizenship. Social exclusion is a term constructed by a society, meaning that its assumption and understanding of the term is dependent on the norms and beliefs in a given country. In order to simplify the term, it is mostly defined as "a state in which individuals are unable to participate fully in economic, social, political and cultural life, as well as the process leading to and sustaining such a state" (United Nations, 2016, pp. 17-31) .

Referring to the multidimensionality of social exclusion, the measurement of its impact across the population is a great challenge. The phenomena concerns not one, but many sectors of life and the importance of each one of them is utterly dependent on the country. Therefore establishing a fix amount of indicators in order to measure the social exclusion rate is a considerable challenge indeed. Not only does the measure have to take into the account national definitions and measurements but also society's personal experience. Therefore data regarding social exclusion comes from many different sources, one of the main ones are surveys for example labour force, health, demographic and living standard surveys that are quite comparable across different countries (United Nations, 2016, pp. 17-31) .

Under these circumstances in order to measure the social exclusion rate the indicator of people at risk of poverty and social exclusion has been established. The indicator accounts for the sum of individuals who are at risk of poverty or are living in household where the intensity of work is very poor or are materially deprived. According to European Commission "at risk-of-poverty are persons with an equalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equalised disposable income (after social transfers). Severely materially deprived persons have living conditions severely constrained by a lack of resources. People living in households with very low work intensity are those aged 0-59 living in

households where the adults (aged 18-59) work 20% or less of their total work potential during the past year.”(People at risk of poverty or social exclusion, [date of access: 18.09.2021]) .

The indicator of population in EU is presented on the figure 2.11 below.

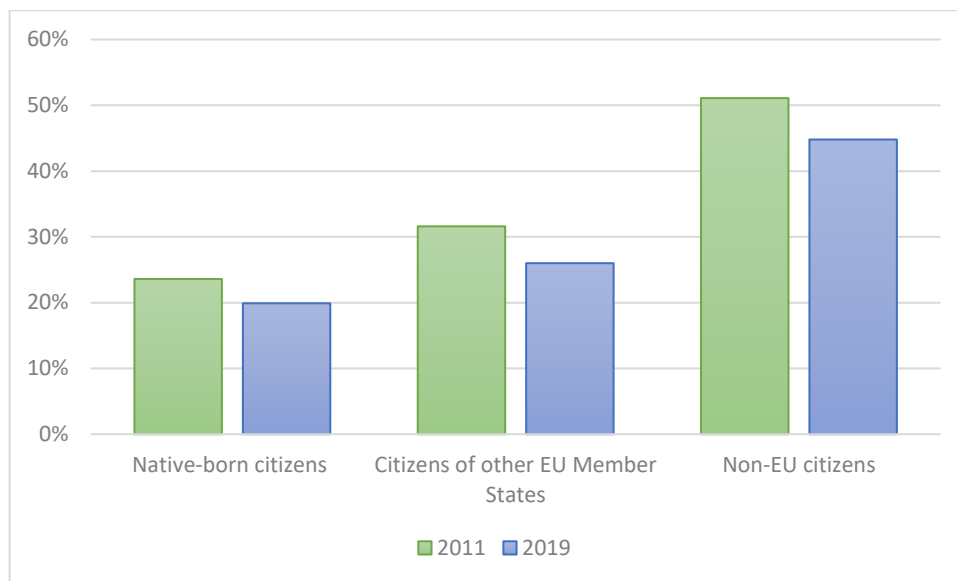


Figure 2.11 People at risk of poverty or social exclusion by broad group of citizenship (population aged 20-64 years).

Source: Own calculations based on data from Eurostat (ILC_PEPS05).

Between the years the share of population at risk of poverty or social exclusion has decreased but only slightly, for example non-EU citizens were at a higher risk of poverty or social exclusion in years 2011 and 2019 than native-born or other EU Member States citizens as their share was equal to 51% in 2011 and 45% in 2019, that's only a 6 percentage points decrease in almost a decade. The decreasing trend was also present when it comes to share of citizens of other EU Member States, the numbers are definitely lower than this of non-EU citizens however the decrease in the values was also poor. In 2011 the share was equal to 32% and in 2019 to 26%. Native-born citizens are in the best position. Despite the fact that only a small share of population is at risk of poverty and social exclusion, there was also only a slight change in the values of the rate, namely from 24% in 2011 to 20% in 2019.

The risk of poverty and social exclusion in 2019 among European Union Member States for non-EU citizens recorded in Greece and Sweden with the value of 57% in both countries. Accompanied by Spain and France with 54% again in both countries. The rate for citizens from EU Member States the rate was again highest in Spain with 44%, Greece 36% and Sweden with 32%. Whereas for native-born citizens the rate recorded in Greece with 31%, Romania 28%, Bulgaria 27% and Italy 26% (Migrants and the risk of poverty or social exclusion, [date of access: 16.09.2021]).

Social exclusion is connected to different areas of everyday life. Therefore process of exclusion can vary and have many overlapping and interconnected dimensions. Firstly, social exclusion concerns mainly on discrimination on the gender, age and ethnicity background, which diminishes the opportunities for individuals to gain an easy access to various social services as

well as reduces their participation in the labour market. Secondly, economic exclusion mainly includes lack or denial of access to different forms of good and services, resources and other forms of 'capital assets'. Other form is cultural exclusion that describes whether the norms, values and different ways of living are respected by the society. Last form of social exclusion is the political one, which involves any activity connected to the politics or citizenship rights such as citizenship rights, freedom of expression, personal security and equality of opportunity (Khan, Combaz, McAslan, 2015) .

These types of social exclusions are strongly connected therefore as the effect of the complexity of influences of these forms on individuals, identifying only one cause of social exclusion is impossible as it involves exclusion in more than one dimension. In order to prevent individuals from being socially excluded certain policies must be established and respected.

All the dimensions of social exclusion impact one specific domain, that is income of the migrant workers. Whether migrants are excluded economically, politically or culturally their income level will suffer as an result of any of these prejudices. Median income level of native-born, non-EU citizens and citizens of different EU Member States is presented on the Figure 2.12 below.

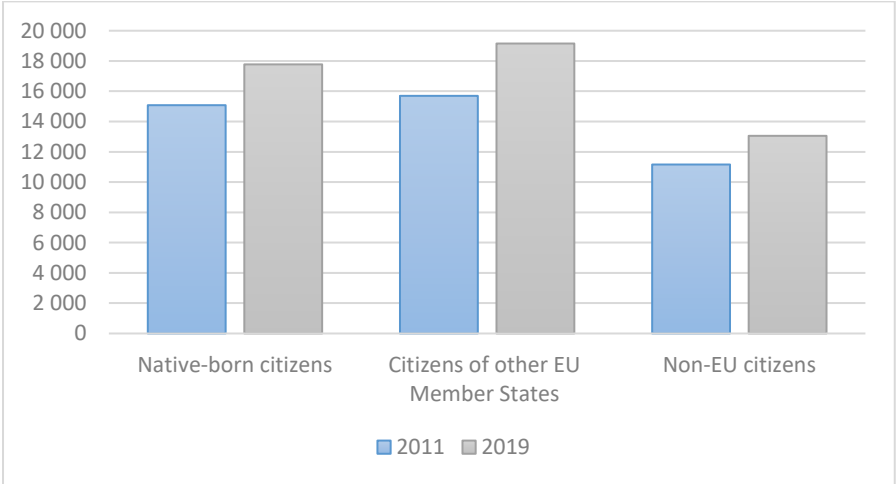


Figure 2.12 Median net annual income by broad group of citizenship (population aged 18 and over). Source: Own calculations based on data from Eurostat (ILC_DI15).

The median net income has increased in all the groups between years 2011 and 2019. The incomes of non-EU citizens have risen from 11 661 euros in 2011 to 13 056 euros in 2019. Where the group with the highest income in 2019 were the citizens of another EU Member State that also noted the biggest increase in their incomes between years 2011 and 2019, namely from 15 697 to 19 153 euros and gained even higher amount of net income than native-born citizens, whose net income in 2011 was equal to 15 080 euros and rose to 17 755 euros in 2019. The net income value is utterly dependent on the sector of employment of all the citizens, which explains why non-EU citizens are the group with the lowest income as they are mostly employed in low-skilled and poorly paid sectors. The high level of income among EU citizens may also be explained by the sector of their employment as they possess access to more employment opportunities than immigrants.

Migration has a great effect on the size and composition of societies both in sending and receiving countries, however its impact on the economy and labour market is utterly dependent on the possessed by migrants skills. If those skills are equal to the ones of native workers that may result in an increase in the competition on the labour market at the same time wages will decrease. However, the level of the wage's decrease is related to the quality of substitute, for example if the substitute is closer, the negative effect on the wage will be greater. On the other hand, if the skills of residents and migrants are complementary then in the result the overall productivity increases and leads to rise in the wages of resident workers. Yet another benefit of migration influence on receiving country's economy is the possibility of creating new investments and knowledge networks as immigration provides new economic resources. When it comes to possible benefits acquired by sending countries, they gain remittances or positive impact of out-migration on employment opportunities and wages (Guzi, Kahanec, Ulceluse, 2021). Migration may also have other, social impacts on behaviours, norms and preferences on both populations from sending and receiving countries as well as on migrants. Despite immigrant workers bringing new skills and occupations that makes possibilities to create more employment opportunities they still encounter a great deal of obstacles while moving to a different country, social exclusion being one of them. As most of the employment sectors migrants work in is not adequate to their education level, migrant workers have to fight discrimination on many different backgrounds. The unemployment ratio is the highest among the non-EU citizens as well as their net income comparing to native-born workers and workers from other EU Member States. What's more migrants still account for the greatest share of people at the risk of poverty and social exclusion. Despite heated debates and many empirical analysis performed on the subject during last decade, the situation of migrant workers is still unstable and full of inequality on different dimensions.

3. CHANGE IN IMMIGRANT SHARE AND LABOR MARKET PERFORMANCE IN ITALY.

3.1. Composition of immigrant population by age and country of origin.

Migration stands as one of the key issues facing both the European Union and Italy. However, in Italy the phenomena of migration is relatively new and dates back to pre-unitary years and includes both external movements as well as internal migration (O'Connell Davidson, Howard, 2015, pp. 28-35). Dating back to 1861, when Italy was a country of emigration, accounting for the highest number of voluntary emigrants, with 13 million nationals leaving in the years 1880-1915. The main factor influencing such numerous population movements was the economic setback in agriculture sector and urbanization, which caused a growing demand for workers in manufacturing sector. As in the rural areas there weren't enough jobs generated, incomes were decreasing also, causing the internal movements mainly from South to North of the country (Scotto, 2017).

Emigration from Italy may be divided into three different periods. Firstly, from 1860-1900, when around 7 million Italians emigrated mostly to European countries, whereas between 1900 and 1928 the destination of emigrants as well as their number has altered, moving mostly to the United States and other non-European countries 12 million nationals left their homes. However, between 1946-1965 around 5 million Italians emigrated to the nearby countries such as Belgium or Germany (Scotto, 2017). Having faced those population movements, both external and internal, the Italian government sought to gain control of the situation by creating various control mechanisms, for example in 1920s the fascist regime created institutions which main aim was to divide workers from rural areas and cities. By connecting employment contracts with the place of residence, the State provided regular employment only to selected group of people that means only the residents and members of the fascist union were to be employed under the system. The rest of the workers was told to create rural communities and work in agricultural sector. This mechanism backfired, and where the mobility has not decreased the control system created a possibility for employing cheap, irregular labour in the seasonal work or sectors requiring little or no skills. The workers became basically excluded from society as their access to services as well as housing situation depended completely on their registries. The anti-urban law established by Mussolini in 1939 was applied until 1961. This control mechanism has deeply divided Italy between "industrial north and poor south". The system and its established values it a scheme for future policies. Furthermore, the later migration policies did not provide the needed access to services and migrants' rights were not respected, their entrance to the country was limited and an inequality between rights of migrant workers and Italian workers occurred (O'Connell Davidson, Howard, 2015, pp. 28-35).

After the World War II many Italians, who have previously emigrated, came back to the country and in the 1970s significant numbers of immigrants started to arrive. Firstly, migrants from Philippines were the main group of immigrants to come in high numbers and were mostly employed in homecare sector. Later on, in the 1980s Italy became a country of destination for

people from sub-Saharan Africa and Middle East. Slowly, the trend of immigration to Italy started to increase and it was acknowledged that migrant workers were becoming a significant part of Italy's labour market. However the trend has escalated only in 1990s after the fall of communist regime in eastern Europe with Albanians accounting for the main group of immigrants. Around this time Italy saw a necessity for improving its immigration policies and including possibility of obtaining asylum by non-EU citizens (Scotto, 2017). Moreover, in the Early 90s the consistent internal migration from South to North Centre has restarted, which resulted in a significant change in human capital and in time, more skilled individuals migrated towards Northern-Centre regions making the migration more selective than before (Calcagnini, Marin, Perugini, 2021, pp. 308-320).

Italian centre-left government attempted to demolish the differences between immigrant and native workers in 1998 by implementing the Consolidation Act n.40, so-called Turco-Napolitano Law, which main aim was to "balance immigration control with social integration principles", in other words this policy separated immigration policies and humanitarian rights. The principle also aimed to abolish the connection between labour recruitment from abroad and immigrants' entry to the country, and to put pressure on control of illegal immigration. Each immigrant arriving to Italy was supposed to be introduced to a sponsor that would provide them accommodation while they were looking for employment opportunities (O'Connell Davidson, Howard, 2015, pp. 28-35). Despite, the efforts, this policy was abolished in 2002 by approving the so-called Bossi-Fini law by the new centre-right government, making the imbalance between immigrants' and native rights appear once again (Scotto, 2017). The main provisions from Turco-Napolitano Law have remained in Bossi-Fini Law, however its main assumption was to make it more strict from the previous one. This time the government focused more on patrolling the borders, forcing irregular migrants to return to their country of origin at the same time it extended their detention in Italy. Moreover, the implementation of this law included reducing integration policies and again the entry to the country was strictly connected to a job contract, what's more visa rules were more strict than in the past (O'Connell Davidson, Howard, 2015, pp. 28-35). In 2009, the 'security package' was formed, which caused a lot of controversy mainly due to its legalisation that made unauthorised migration a felony, allowing the creation of security patrols in order to observe public areas (Scotto, 2017). Moreover, the package connected the strict visa rules to the already linked job contract and right to stay and allowed the immigration control system to control immigrants' movements inside the country and also to restrain their social rights. Migrants could also be denied to register in municipal registries (O'Connell Davidson, Howard, 2015, pp. 28-35).

Besides the efforts of centre-left government to balance the rights of immigrants, by 2009 all of the policies enabling to do that, were demolished by the centre-right government that has only deepened the imbalance between migrants and natives at the same time excluding immigrants from their protection and limiting the right of residence to certain individuals.

Until 2015 the issue of immigration was pushed back as the economic crisis was of the most importance. However, after the European refugee crisis the problem arose again. Since 2011 the government of Italy was ruled by coalition so immigration matters were dealt with, not only by one political party. During the refugee crisis Italy was one of the countries with the highest

number of refugees as well as illegal migrants, it was also one of the main countries of destination as it had access to the open sea, by which most of the migrants came. Italy has asked European Union for their greater involvement in receiving and taking care of the asylum seekers, but has also enforced more strict measures in order to control the flow of immigrants. In 2017 the Minniti Decree was implemented allowing to distinguish asylum seekers from illegal migrants and hasten the application process for them. However, asylum seekers did not have a chance for second appeal, therefore government has increased the amount of detention centres and encouraged asylum seekers to seek voluntary jobs. Despite the lack of support of government towards migrants as immigration was mostly considered a security issue, nongovernmental organizations were deeply committed to provide assistance, reception and integration of migrants. (Scotto, 2017).

Implemented policies had a great impact on the number of incoming immigrants, but they were not the only factor. Immigrants were drowned to other countries as a result of various political, social and economic factors in country of origin. Figure 3.1 presents the total number of immigrants in Italy.

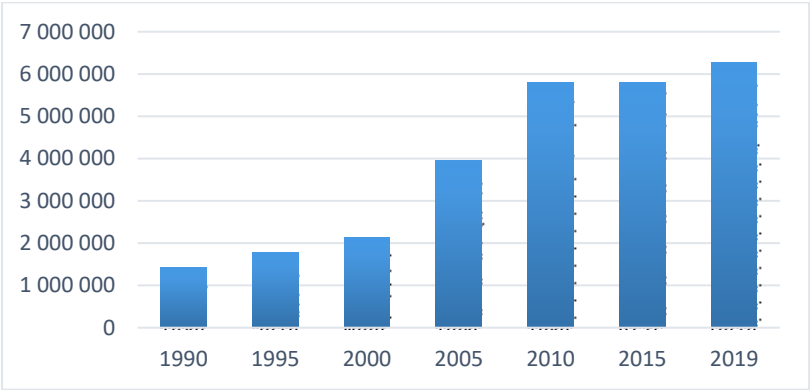


Figure 3.1 The total number of immigrants in Italy in years 1990-2019. Source: United Nations database, POP/DB/MIG/Stock/Rev.2019.

Since 1990 the number of foreigners living in Italy has grown significantly. The increasing trend has strengthened especially after the year of 2000. The rise in share of foreigners contrasts with the demographic decline of Italian population. In 1990 with the population of 56, 72 million citizens, Italian migrant stock was equal to 1,43 million, only to increase up to 6,27 million immigrants of which more than two thirds, that is 4,45 million are from non-EU country of origin. Whereas the migrant population has increased sharply, the Italian population has grown only slightly and in 2019 there were 59,73 million citizens in Italy (United Nations database, POP/DB/MIG/Stock/Rev.2019). The phenomenon of immigration in the beginning of 1990s was the diversity of origins as people came from various environments, cultures and races. The significant rise of immigrant population is an outcome of many economic, social and political factors influencing immigrants decisions. As Southern Europe began to be viewed as a desirable place of destination due to its ‘leaky’ borders as well as relatively easily accessible from the Southern shore of Mediterranean Sea (Ambrosini, 2011). Moreover another factor has pulled migrants towards Italy, regarding to the easy entry to the country, Italy started to be viewed as

“replacement destination” by immigrants with restricted entrance to their traditional immigration destinations such as France, Belgium and Germany in 1970s. Due to these circumstances Italy has experienced a great deal of population inflow from Third World countries, that after reaching Italy, migrated farther away, for example to Portugal, Spain and Greece (King, 1993, pp. 283-292). However, from 1990 new inflows of immigrants have started to develop, mostly as an outcome of new establishment of democracy and freedom of movement in the Eastern Europe’s countries such as Romania, Albania and Poland. Despite this, Albanians remain an exception as according to the political and economic instability in their own country, they migrated in high numbers in 1991. Nevertheless in 1990s Italy has experienced a relatively new phenomena of high numbers of immigrants coming from Third World countries in Africa, Asia and Latin America, for example immigrants from countries in Africa accounted for one-tenth of immigrants with granted residence permit, however in 1990 they contributed for almost one-third (King, 1993, pp. 283-292) . Another significant group of incoming population was that from developed countries such as United States of America, United Kingdom, Germany and France. Mostly workers of high-skilled sectors of employment, teachers and office workers accounted for the majority of this group, however it also included a considerable number of spouses of Italian native citizens. This type of migration was an outcome of the creation of the Single European Market as well as the expansion of multinational companies across the country (King, 1993, pp. 283-292).

The total share of immigrants, by country of birth, living in Italy in years 1990, 2000 and 2019 is presented on the table 3.1 below.

Table 3.1 The share of immigrants in Italy by country of birth in years 1990, 2000, 2019.

1990			2000			2019		
Country of origin	Number of foreigners	Share of foreigners	Country of origin	Number of foreigners	The share of foreigners	Country of origin	Total number of foreigners	Share of foreigners
Morocco	169 285	11,85%	Morocco	285 569	13,46%	Romania	1 074 382	17,13%
Germany	96 165	6,73%	Albania	274 408	12,93%	Albania	475 196	7,57%
North Macedonia	72 688	5,09%	Romania	118 736	5,60%	Morocco	450 557	7,18%
Tunisia	70 813	4,96%	Philippines	85 612	4,04%	Ukraine	246 367	3,93%
France	66 902	4,68%	Serbia	78 207	3,69%	China	228 231	3,64%
Philippines	65 197	4,56%	Tunisia	75 563	3,56%	Germany	218 158	3,48%
United States of America	63 755	4,46%	China	74 865	3,53%	Switzerland	199 233	3,18%
United Kingdom	59 492	4,17%	Germany	55 640	2,62%	Republic of Moldova	188 923	3,01%
Senegal	44 973	3,15%	Senegal	49 429	2,33%	India	161 364	2,57%
Albania	44 935	3,15%	Peru	46 699	2,20%	Philippines	153 280	2,44%
Switzerland	43 544	3,05%	France	46 478	2,19%	France	132 810	2,12%

1990			2000			2019		
Country of origin	Number of foreigners	Share of foreigners	Country of origin	Number of foreigners	The share of foreigners	Country of origin	Total number of foreigners	Share of foreigners
Romania	40 066	2,81%	North Macedonia	44 512	2,10%	Bangladesh	123 894	1,97%
Egypt	40 045	2,80%	Egypt	43 336	2,04%	Egypt	122 040	1,95%
China	32 172	2,25%	Poland	43 160	2,03%	Poland	118 588	1,89%
Argentina	31 345	2,19%	India	43 109	2,03%	Peru	117 189	1,87%

Source: Own calculations based on data from UN (POP/DB/MIG/Stock/Rev.2019).

During the last 30 years the migration trends in Italy has changed significantly. Comparing the immigrants' countries of origins from 1990 and 2019 both the number of incoming population has changed as well as its structure. At the beginning of the century, in 1990 the highest number of immigrants coming from a certain country did not exceed 200 thousands, whereas in 2019 over 1 million citizens came from Romania. Moreover in 1990s immigrants from Morocco accounted for the majority of incoming population namely 12% of foreigners in that year. Moroccans remain one of the main immigrants group throughout the 30 years and contribute as the third major group of foreigners in Italy in 2019. This ongoing migration of Moroccans is connected to their population movements from 1960s as the labour migrants were encouraged to migrate to Europe in order to take part in its renovation after the Second World War. In order to do so, Moroccans were offered temporary employment opportunities and residence. However, Moroccans labourers have settled in and in 1970s high numbers of Moroccans travelled to Europe as a matter of family reunification (Djaha, 2013) . Until now their migration trends have not decreased, despite the efforts of government of Morocco. The group of migrants coming from advanced countries accounted for around 25% of foreigners. The rest of immigrants came mostly from Third World countries. The trends of immigration has changed greatly during this 30 years. The number of immigrants from advanced countries has decreased significantly and most of them come only from three countries - Germany, France and Switzerland. However, the number of foreigners from Third World countries has increased considerably. In 2019 Romanians accounted for 17% of the whole migrant stock, whereas Moroccans only for 7%. The phenomena of emigration from Romania has started in 2000s , when Romanians gained more mobility opportunities, the trend has grown after the country joined the European Union in 2007. The movement of Romanian population is mostly an outcome of lack of employment opportunities in the country. In comparison European countries offer employment opportunities mainly for low-educated Romanians and in low-skilled employment sectors where labour shortage takes place due to the population ageing analysed in previous chapter. Romanians find employment mostly in sectors such as agriculture, construction and manufacturing as well as health care and nursing (Business Review, (date of access: 20.09.2021).

A new group of incoming foreigners included Ukrainians. As one of the post-communist countries Ukraine has struggled greatly in the last decades and was the least successful one during the transition from planned to market economy with its GDP level decreasing between years 1991 and 1999. The rise of corruption has slowed down the Ukrainian economic growth. Moreover, Ukraine did not get a chance for farther improvements as its economy has been damaged by 2014 Russian annexation of Crimea, which escalated into war at the eastern border. Therefore, between 1991 and 2019 Ukraine lost around 9 million citizens (Vakhitova , Fihel, 2020, pp. 125-141).

After taking a closer look on the numbers and origins of immigrants arriving to Italy it is essential to analyse their age and gender structure. The number of males and females is relatively the same, however females slightly outnumber amount of male immigrants. The total number of foreigners in Italy in 2020 was equal to 6 161 391, where females accounted for 53,70% of total foreign population with number of 3 308 664, therefore men’s population made up for 46,30% with the total number of 2 852 727. Figure 3.2 presents the age and gender structure of foreign population in Italy in 2020.

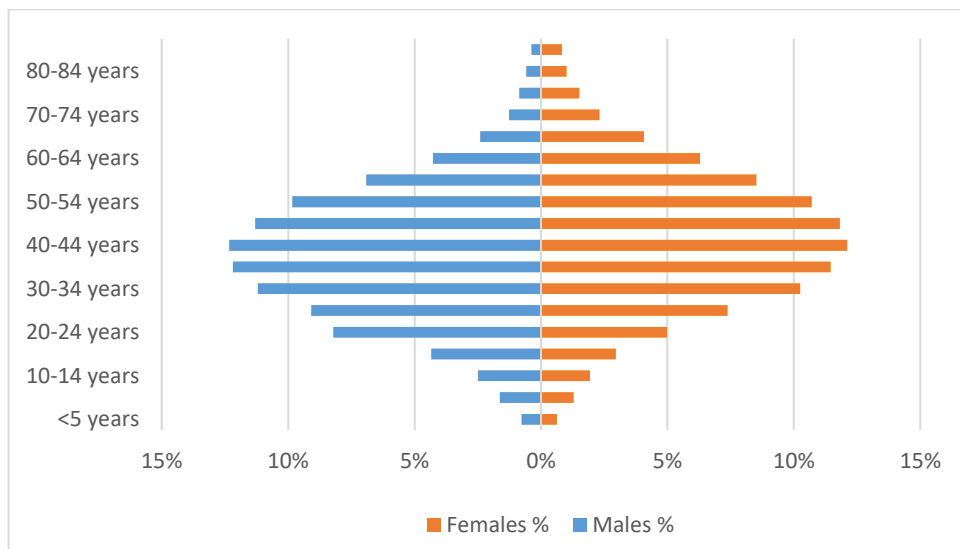


Figure 3.2 The age and gender structure of foreign population in Italy in 2020.
Source: Own calculations based on data from Eurostat (migr_pop3ctb).

The population ageing phenomena, analysed in the previous chapter, takes place in Italy as well. Therefore, the age structure of arriving immigrants is of great importance in order to understand the current trends as well as to evaluate the number of potential labour workers and possible effects of the foreigners arrival on natives’ demographic structure. The age structure of immigrants presents that most of the foreign population is of working age as people aged 20-64 account for 84,33%, where 53,16% of people this age are women and 46,84% are men. Meaning they have a high chance of finding an employment on Italian labour market. People in working age stand for more than two thirds of all foreign population, which leaves around 8% both people aged 0-19 and 8% people in aged more than 65. Therefore, the immigrant population mostly consist of people in the working age that may have a great impact on Italian labour market. What’s

more the Italian immigration population is dominated by people from non-EU countries as they account for 73% of the total foreign population.

Not only has the structure and amount of immigrants altered over time but also the reasons for their movement. Most of the immigration mobility started out as an outcome of lack of employment opportunities in countries of origins or the economic or political instability. However, overtime foreigners provided with employment opportunities and economic stability did not desire to return to their countries. Moreover, greater number of migrants sought to emigrate towards European Countries. Provided with greater mobility, employment and education opportunities immigration became a desirable option. Where in 1990s employment was the main reason for movement in 2019 Europe and Italy are dealing with a significant change in this trend that has taken place between years 2010 and 2019, a change that may not be reversed. The Figure 3.3 presents the number of residence permits by reason between years 2010 and 2019.

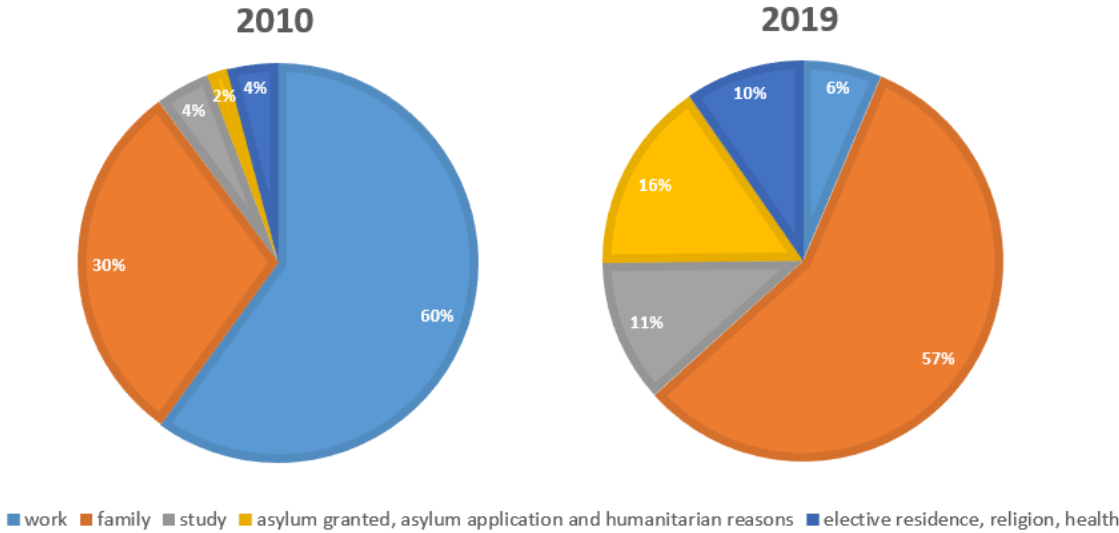


Figure 3.3 Number of residence permits by reason in years 2010 and 2019. Source: Own calculations based on data from ISTAT.

Five reasons for obtaining a residence permit by a foreigner are distinguished, namely work, family, study, asylum application and humanitarian reasons, and lastly, elective residence, religion, health. In 2010 main reason of gaining residence permits by immigrants were employment opportunities, which accounted for 60% share of all granted residence permits that year. The second most common reason was family, which contributed for 30% of all permits issued. The remaining ten percent of all permits was divided between three categories. Study and elective residence were the reasons with 4% share. The remaining 2% share of all permits were granted for asylum seekers. Compared to 2019, the trends from only a decade before have altered significantly as an effect of various factors. In 2019 employment opportunities were no longer the main reason for issuing a residence permit as their share fell by 54 percentage points and was equal to only 6% share of all permits. Meaning that immigrants were no longer arriving to Italy in order to find employment. Family reunification grew to contribute for the greatest share of permits with 57% of the total amount. Second main reason for issuing residence permits turned

out to be asylum application and humanitarian reasons which share rose from only 2% in 2010 to 16% in 2019. This rapid increase was caused by the Europe’s Migrant Crisis in 2015, where great number of illegal immigrants arrived on Italy’s shores. Education opportunities accounted for 11% share of all permits, which is a 7 percentage points increase from the value in 2010. The elective residence share has increased by 6 percentage points and remained the least chosen reason for granting a residence permit.

The change in factors influencing immigrants to fill in applications for residence permits was largely caused by the migration flows that started in 1970s. The mentioned analyse of Albania, Ukraine and Morocco populations are an example of immigrants’ movements schemes and trends. Whereas at the beginning the population mobility was an outcome of economic instability and shortage of labour opportunities, the high numbers of immigrants that moved in search of employment have remained in their country of destination, gained the residence permit and therefore enabled an opportunity for future generations to move. Moreover, many of those immigrants moved on their own only to send remittances to their home country. However, overtime the possibility of living in another country with their spouses or families became a real possibility, therefore the family reunification contributed as a main reason for mobility a decade later. The rapid growth of number of issued residence permits for asylum seekers is an effect of the irregular migration that took place during the Europe’s Migrant Crisis. In the period from 2014 to 2016 the amount of asylum seekers escalated. The exact total number of illegal entries is not possible to assess, however the arrivals by sea were easier to document, therefore Figure 3.4 presents the number of immigrants who arrived by sea between 2014 and 2021.

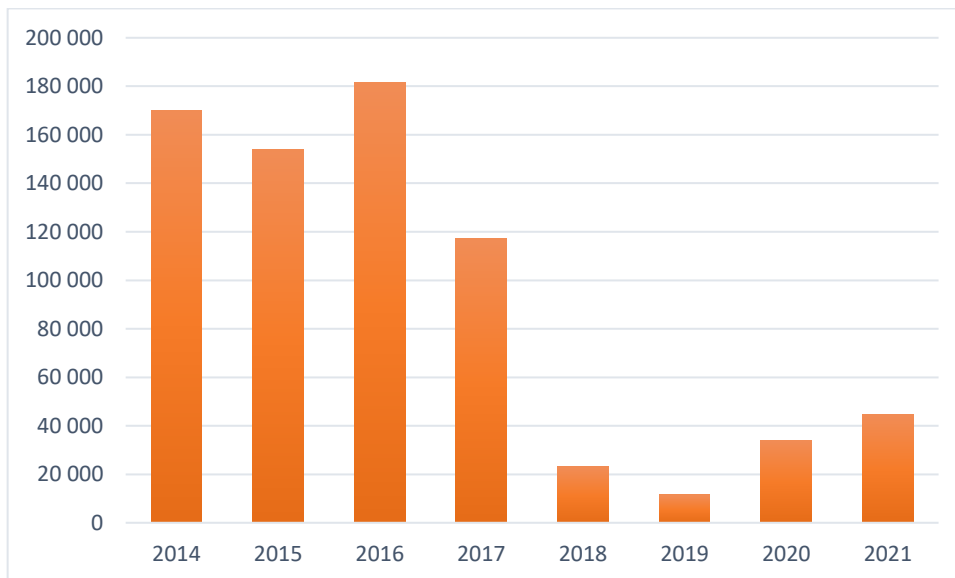


Figure 3.4 Number of immigrants who arrived by sea between 2014 and 2021.
Source: Own calculations based on data from Statista 2021.

In the past Italy has not been a country of destination for refugees and asylum seekers. However, that has changed after the Arab Spring in 2011. Requests for asylum have risen from 37,000 in 2011 to 45,000 in 2014 [MPI, (date of access: 23.09.2021)]. This phenomenon was relatively new, nevertheless Italy did not have time to adjust to this new situation as greater

number of refugees and asylum seekers were about to arrive on Italy's shores. In 2015 the Migrant Crisis started, the rise of ISIS, the Syrian civil war, and instability in Afghanistan, the Middle East and elsewhere drove record numbers of people to leave their homes and try to make the crossing to Europe, which was a well thought out decision. Syrians were aware they couldn't seek for help in the neighbouring countries of the Middle East. At this point, it was practically impossible for Syrians to gain legal entrance to other Arab countries. To make matters more desperate, a huge shortfall in UN funding has led to cuts to the hand-outs given to refugee families every month – making the Middle East an increasingly unattractive place for them to stay. That is a factor that made Europe seem as an increasingly attractive option. Migrants landed on the shores of Italy and Greece, but that wasn't the end of the journey. Refugees wanted to get mostly to Germany in which they were given more opportunities, social care and other benefits. That stands as one of the reasons why most of refugees landed in Italy. Syrians seemed to think the best way to get to Europe was by sailing from Libya to Italy. Several thousand went from Turkey to Greece, but the that amount was far lower – either because it was a lesser-known route, or people were deterred by the prospect of having to leave the EU again in order to get to western Europe. Once you get to Greece, you still have to walk through the (largely non-EU) Balkans to get to Germany. But if you make it to Italy, you will never leave the EU. (Guardian, (date of access: 24.09.2021)). Figure 3.4 presents this trend as significant jumps in the numbers of arrivals by sea have taken place between the years 2014-2016. In 2014 more than 170 100 people arrived on Italy's shore, that number dropped in 2015 to 153 842 immigrants, only to rise again in 2016 up to 181 436.

European Union requires that refugees and asylum seekers to fill in the application in the first Member State they arrive to, however many that have arrived on Italy's shores tried to go around the application process in order to submit it only in their country of destination. However in order to prevent this from happening many of the Member States have set up border controls meaning that Italy had to take care of a great number of asylum seekers on its own [MPI, (date of access: 24.09.2021)]. Dealing with such great jump in numbers of incoming immigrants, Italy has taken some measures for management of arrivals by sea and so has European Union. The deal signed between European Union and Turkey has stopped people-smuggling by funding, among other things, healthcare and education, which ultimately lead to the shutting down of the Balkan route for immigrants. After implementing those deals and new measurements the number of arrivals by sea has decreased sharply as the number of arrivals of 181 436 in 2016 has shrunk into 117 153 in 2017. Later on the amount of arrivals have decreased and fell to only 11 471 in 2019. However, now with the escalating political conflict in Tunisia Italy fears another migrant wave might take place, however not in such high numbers as during Arab Spring or Migrant Crisis [Euronews, (date of access: 25.09.2021)]. Nevertheless, the change in amount of arrivals is already visible with 44 778 immigrants in 2021.

The amount of arrivals by sea has decreased greatly since 2014, but problems are increasing. Countries such as: Germany, France and Italy, that have given shelter for refugees and asylum seekers in high numbers are now struggling with the consequences of not drawing

the line of tolerance while accepting to host the immigrants. Various conflicts on ethical, social and religious background are now starting to arise. There is a mix of cultures, beliefs and nationalities that is getting out of politicians hands and yet must be handled carefully and reasonably.

Italy varies significantly between regions due to economic differences. Country does not only hosts the external migration but also the previously mentioned internal population movement, mostly from Southern regions to Northern ones. The distribution of immigrants is utterly dependent on the economic factors and employment opportunities. Foreigners tend to settle in urban areas meaning they move mostly to Northern regions of Italy, which are better prospering than the South. Figure 3.4 presents the distribution of foreign population in all the Italian regions in years 2019. The volume of foreigners is the highest in Northern regions. In 2019 1 130 587 foreigners were residents in Lombardy, which makes up for almost 23% of total foreign population with Lombardy hosting the greatest number of immigrants that year. Other regions with highest number of foreigners are situated in the North as well, those are namely Lazio with 626 748 immigrants, Emilia-Romagna with the number of 529 580, Veneto with 481 916 foreigners and lastly Piemonte with 406 489 resident foreigners. Lazio, region situated in the centre part of Italy hosted the second highest number of immigrants after Lombardy equal to 626 748 that is around 13% of all foreigners.

Southern regions of Italy host significantly smaller amounts of immigrants due to its lack of employment opportunities. The foreigners share in those regions is the highest in Campagna with 252 228 foreigners and the lowest in Molise with 13 287 immigrants.

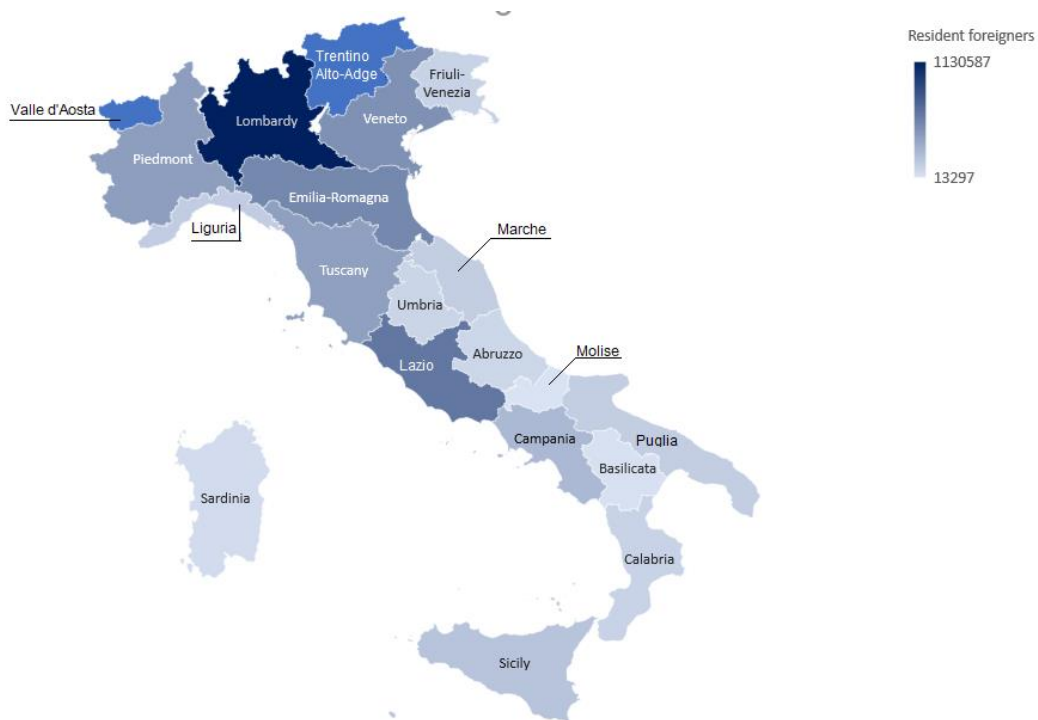


Figure 3.5 Distribution of resident foreigners in Italian regions in 2019.
Source: Own calculations based on data from ISTAT.

The distribution of foreigners is utterly dependent on their country of origin as well as history of their population movements that brought them to Italy. There are some gender distinctions between the number of foreigners. The vast majority of foreigners coming from Europe Albania and countries from centre and east, Northern America (USA), Central and South America that is mostly Peru and Brazil are women. Whereas foreigners coming from Africa that is mostly Morocco, Egypt and Nigeria and Asia where most foreigners come from China, Bangladesh and India are men.

Therefore from the sending country Italy has become a receiving country with a widely diverse society. Meanwhile the quite rapid change has caused the native Italian residents to deny the reality resulting in imbalance between migrants' and natives' rights. Despite the high amounts of workforce, both regular and irregular, Italian market still struggles to provide the acceptable working conditions for foreigners and social rights. This position is only backed up by the attitude of politicians and media. It seems as immigrants are widely accepted by the Italian society however only on individual level, when it comes to a group of society, Italian citizens start to fear as an effect of tensions between politics, religions, cultures and markets. Therefore Italy is facing a dilemma of how to unite the society when it varies on many backgrounds (Ambrosini, 2011).

3.2. Education and skill profile of immigrants.

Education attainment level of immigrants plays an important part in their integration with society in the receiving country. It is said to guarantee the employment opportunities adjusted to the level of education of immigrants, however that is often not the case. Migrants' education attainment level does ensure their future prospects of finding a job in the sector they are qualified and trained in. Usually employment of foreigners is dependent on the labour market shortages and labour demands. The adjustment of labour work performed by immigrants is still an issue in Italy as well as in European Union.

In 2020 around 35,6% of foreigners born in another EU Member State aged 25-54 attained the tertiary level of education. However this number has decreased among immigrants born outside the EU Member States and was equal to 29,6%. [Eurostat, (date of access: 26.09.2021)] Moreover according to Eurostat the highest shares of foreigners with attained low education level were hosted by Italy namely 49,1%, Greece 39,2% and Spain with 36,1%. What's more it is estimated that both in Spain and Italy comparatively high number of native-born population of working age consisted mostly of workers with low secondary level of education attainment. [Eurostat, (date of access: 26.09.2021)].

According to many reports and research a tremendous share of immigrants works mainly in the employment sectors that offer unskilled or low-skilled job positions. Moreover, the sectors of employment of immigrants are dependent on their possession of residence permit or citizenship. The common situation of issues with finding employment is connected to irregular migrants that arrive to country illegally however later in time they manage to acquire a residence permit thanks to various amnesties granted by Italian Government. Nevertheless in order to gain a residence permit in Italy it is demanded of foreigner to provide a confirmation of employment meaning that

the foreigner should hold a regular job while applying for the residence permit. Therefore many of illegal immigrants crossing the Mediterranean Sea and arriving on Italy's shores in Southern regions moves to Northern regions in pursuit of employment opportunities (Brücker, Fachin, Venturini, 2011, pp. 1078-1089).

For immigrants finding an employment in sectors with labour shortages is of no difficulty. According to Bratti and Conti (2018) as well as Del Boca and Venturini (2005) immigrants arriving to Italy are in high numbers low skilled and have a low education attainment level. (Brunello, Lodigiani, Rocco, 2020). However that trend is slowly changing as number of high skilled immigrants is increasing as well as their areas of origins. Foreigners are now coming mostly from urban areas, where they are able to obtain higher education level.

Figure 3.5 presents the share of the Italian population aged 25-54 years, by educational attainment level, sex and country of birth in 2020. The share of women in working age with tertiary education attainment level was continuously higher than the share of working age men throughout all three population groups. The greatest gap between two genders was registered in the native born working age population, with 8,60 percentage points difference in shares, where women with tertiary education accounted for 28,90% and men contributed to 20,30% of this population. Nevertheless, this gap was still relatively high in other two groups, among the working age population born in other EU Member State the difference recorded was equal to 6,50 percentage points and 7,50 percentage points among persons of non-EU origins.

However, these proportions were completely reversed amongst groups with low education attainment level where men accounted for the highest share of working age persons. Men mostly attained less than primary, primary and lower secondary education as in the previous example the differences between the education attainment level are significantly higher. When it comes to population coming from European Member States the difference equals 9,30 percentage points. This gap grows even higher between women and men coming from countries outside the EU and equals 10,20 percentage points with 60% of men with low education level and 49,80% of women. The proportion changes when it comes to share of foreigners with obtained upper secondary and post-secondary non-tertiary education level. Men of native-born population slightly outnumber women as the gap between genders is equal to 2,80 percentage points with men share of this education level of 47,10% and women share of 44,30%. However in the case of foreigners from other EU Member States the gap between genders equalled 2,80 percentage points with the favour of women share with 52,20% and men of this education attainment level share of 49,40%.

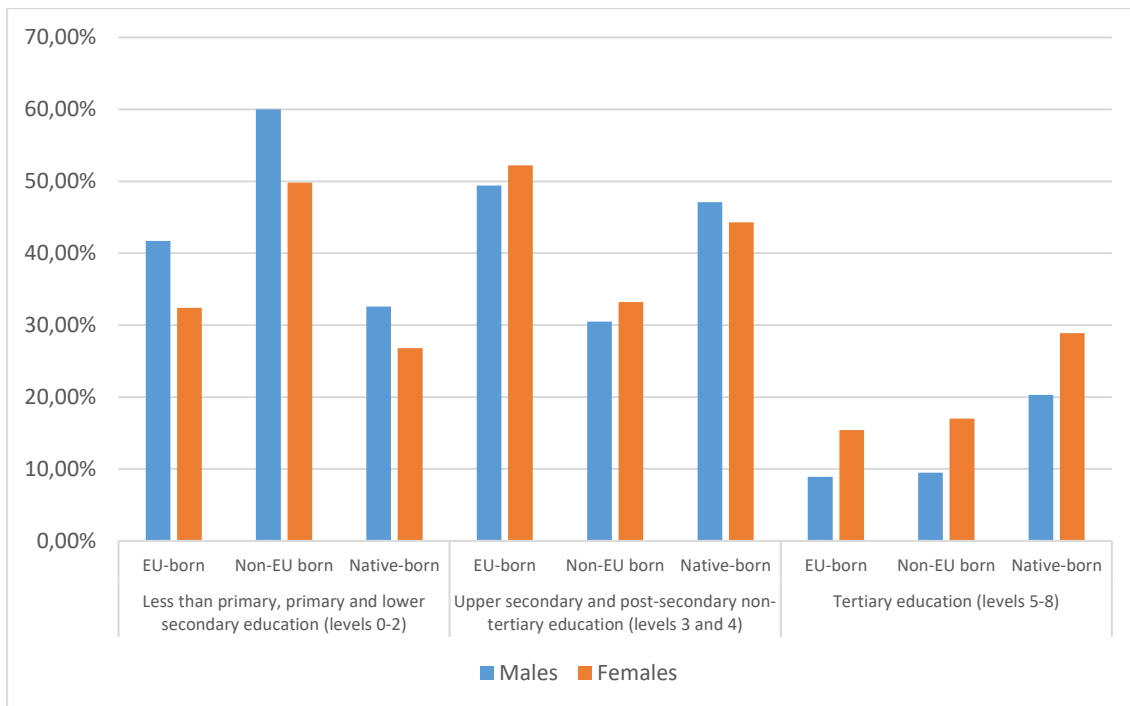


Figure 3.6 the share of the Italian population aged 25-54 years, by educational attainment level, sex and country of birth in 2020.

Source: Own calculations based on data from Eurostat (edat_ifs_9912).

In conclusion foreigners of Non-EU origins arriving to Italy have mostly obtained only the primary level of education attainment and therefore stand for the greatest number of low-skilled workers, however they account for the second group of population with tertiary education level. EU-born persons contribute to the highest share of population with upper secondary and post-secondary non-tertiary education. Tertiary education level in the highest share was obtained by native-born population. What's more, women acquisition of tertiary education level was higher than the highest among all groups.

Another important factor is ought to be taken under consideration while analysing the immigrants education attainment level. As most of immigrants in Italy turn out to be low-skilled what are their chances and opportunities for education in Italy? How does their education path look like? In order to answer those questions a presentation of share of early leavers from education and training is of significance. According to Eurostat early leavers from education and training are defined as "as people aged 18-24 years having attained at most a lower secondary level of educational attainment and who did not participate in further (formal or non-formal) education or training in the four weeks preceding the labour force survey."

Figure number 3.6 presents the share of early leavers from education and training, between years 2011 and 2020 in Italy.

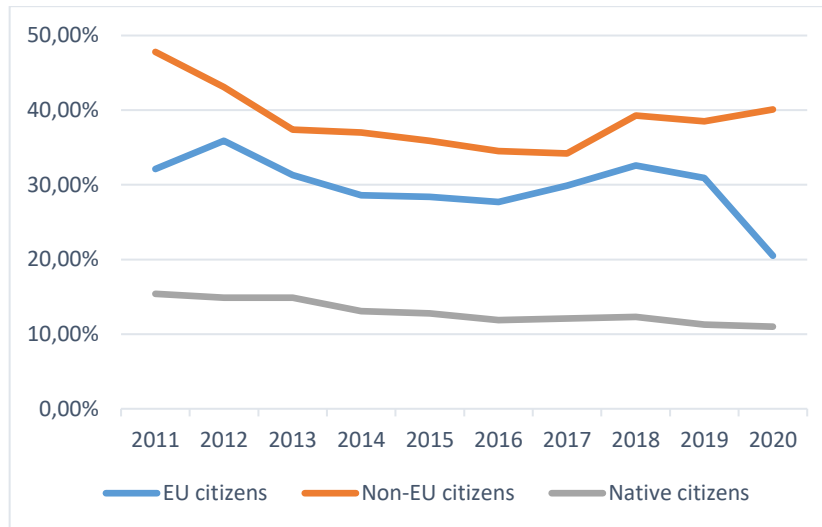


Figure 3.7 The share of early leavers from education or training, aged 18-24 between years 2011 and 2020.

Source: Own calculations based on data from Eurostat (edat_lfse_01).

As presented on the above EU citizens and Non-EU citizens are exposed to a greater risk of not participating in the further education or training and leaving their education without completing more than a lower secondary education level. The share of Non-EU leavers from education and training has fell during the last decade. The lowest level of leavers among this group was recorded in 2017 and equalled 34,20% with decrease of 13,60 percentage points from 2011. However, the number has slightly rose again reaching 40,10% share of Non-EU citizens leaving education and training in 2020. EU-citizens shares of leavers between 2011 and 2020 are definitely lower than those of Non-EU citizens, however still significantly higher than that of native citizens. The share of EU citizens leaving education and training is relatively stable with some minor changes. The share of leavers has fell between years 2012 and 2016 by 8,20 percentage points. The share has been rising until 2019 when it fell rapidly and was even lower than in 2011, with 20,50% of leavers. The share of native citizens leavers has practically not changes and equalled 11% in 2020. Overall in the years of 2011-2020, the proportion of early leaving foreigners recorded the highest share of foreign early leavers among EU Member States with 32,1%.

However, considering the greatest differences between shares of native citizens and foreign citizens leaving education and training Italy has taken the third place with 21,2 percentage points, right after Greece with 24,1 percentage points and Cyprus with 21,9 percentage points. Those results may be an outcome of foreigners pursuing mostly employment opportunities and as most of immigrants work in low-skilled sectors therefore their job positions don't require of them to attain higher education level.

Another indicator assessing the immigrants' education opportunities is called NEET, that is an indicator of education and employment of foreign and native citizens. The abbreviation stands for the share of young people neither in employment nor in education and training. This indicator describes the share of population aged 15-29 years that are neither employed nor

involved in further education or training. Again higher shares of NEET were recorded among EU and Non-EU citizens, however the second group mentioned accounts for the highest shares of NEET. Figure 3.7 presents NEET percentage values in Italy by citizenship between 2011 and 2020. A continuous trend in this indicator's share has occurred in the given time period. The value of NEET rose in effect of the international economic crisis peaking in 2013, from when it started to decrease until 2019. The NEET value has risen again between 2019 and 2020 in all the population groups, especially amongst Non-EU citizens. In 2020, the NEET rate for people aged 15-29 years in the EU was 12.7 % among the native-born population, while the rates for young people born in another EU Member State (18.6 %) and those born outside the EU (24.6 %) were higher. According to MIUR in 2019 there were around 842,000 students of Non-Italian Citizenship, which accounts for approximately 9,7% of the total amount of students in Italian schools, from pre-school up to upper secondary education. While the share of foreigners students haven't increased in 2015, the number of those students has then rise by 15 000 units in 2019, whereas the total number of Italian students is decreasing (Cesareo, 2019).

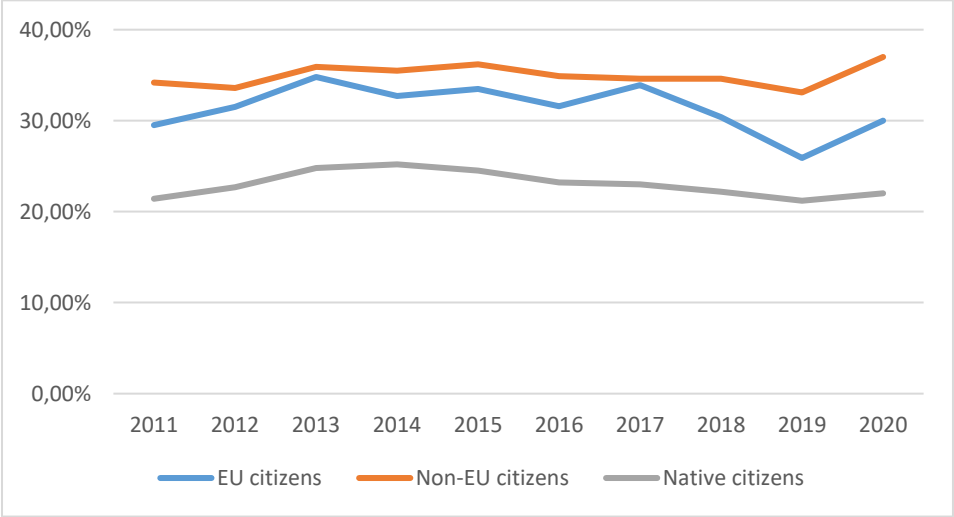


Figure 3.8 The share of young people neither in employment nor in education and training in years 2010-2020.

Source: own calculations based on data from Eurostat (edat_ifse_23).

If the number of students with foreign citizenship is decreasing while Italian school population is decreasing does immigration affect the educational choices of native-born population? According to Brunello, Rodigiani and Rocco the so called “human capital polarization” that is an increased share of native-born population with low and high education attainment level may be an outcome of immigration. The evidence provided by the authors states that the inflow of low skilled foreigners has resulted in increased share of population with low and high education level of natives. As the number of immigrants is increasing the education choices are diverse. Whereas some individuals tend to pursue a white-collar career by obtaining high education level, others get detached from the labour market and leave the education or training. It was also proven that native-born men that leave their education at the early stage due to immigration tend to work in manual and service sectors, whereas women are likely to be inactive (Brunello, Lodigiani, Rocco, 2017).

3.3. *The situation of immigrants' on the Italian labour market.*

The education and skill profile of immigrants arriving to Italy is of great importance as it influences their employment opportunities and wages. However, employment of foreigners depends on many factors sometimes not connected with their education attainment level but mostly with the labour market demands. Therefore, there is an imbalance and lack of adjustment of labour work with immigrants' education. Regardless of immigrants coming to Italy in pursuit of employment the Italian labour market is characterized by the high level of uncertainty and faces many difficulties. Labour market present demands are the effect of changes that have started in 1970s, when young people of working age started to refuse employment in various sectors. The whole phenomena has started even a decade before when in 60s people from rural areas started to turn down jobs in agriculture sectors, which was mainly caused by hard working conditions such as working long hours in difficult environment. The same applied to refusing employment in domestic sectors in urban areas also due to the difficult working conditions. However in the second case the social status was of significance for workers, as employment in domestic sector did not seem desirable and satisfactory. This phenomenon resulted in high labour shortages among young working age population and a labour demand for the refused job positions (Frey, Livraghi, Venturini, Righi, Tronti, 1996, pp. 45-67).

In order to change the labour market flexibility the Italian government established various reforms that affected the tightness of labour market in mid-90's. This was to achieve by establishing new types of contracts, namely temporary contracts. The first reform in 1997 enabled more flexibility by allowing the employers to hire workers on temporary basis. Moreover, the reform has introduced various flexible contracts such as vocational training contracts. The second reform of 2003 has introduced various atypical contracts of limited time duration such as staff leasing, work experience programmes as well as apprenticeships, part-time jobs and so on. Therefore the number of atypical contracts has increased since the implementation of the two reforms. What's more the highest amount of those contract were recorded in Southern regions of Italy such as Sicily and Puglia (Calcagnini, Marin, Perugini, 2021, pp. 308-320).

Nevertheless, Italy was still facing the high unemployment rate among youth, which became one of the objectives of the Italian government since 2013. The previously mentioned Bossini-Fini law established that the residence permit would only be granted to a foreigner if he proves he has a regular job in Italy and contract was signed before the arrival to the country. The law has only worsened the situation of immigrants on Italian labour market, therefore the number illegal immigrants has increased sharply. Being aware of Italy's issue of ageing population a great number of immigrants started to work for elderly people, that is in domestic sector. As a result the high labour shortage in this sector has decreased as an effect of immigrants employment. This situation was a beginning of unauthorized foreign care workers that consisted of illegal immigrants holding positions in domestic sector. Italian government has later supported the employment of foreigners in this sector in order to fulfil the labour shortage. However, the support of Italian Government was given to the elderly native citizens hiring the foreign workers as they were given

a public pension and attendance allowance in order to pay for the immigrants services (Simionescu, 2021).

The high number of incoming immigrants puts a pressure on Italian Government to adjust the already existing labour policies to an increasing number of foreigners in order to successfully integrate the migrant population with native citizens. Moreover those policies should interact with migration ones which are constantly revised.

Therefore, if immigrants are said to be the answer to the labour shortages it is of great importance to take a closer look at their overall employment as well as the sectors of their occupation. The Employment Rate is a percentage measure of total amount of employed individuals in relation to the whole working age population. Figure 3.8 presents the employment rate of three population groups, namely, born in EU Member States, born outside the EU and native-born each of them divided by genders.

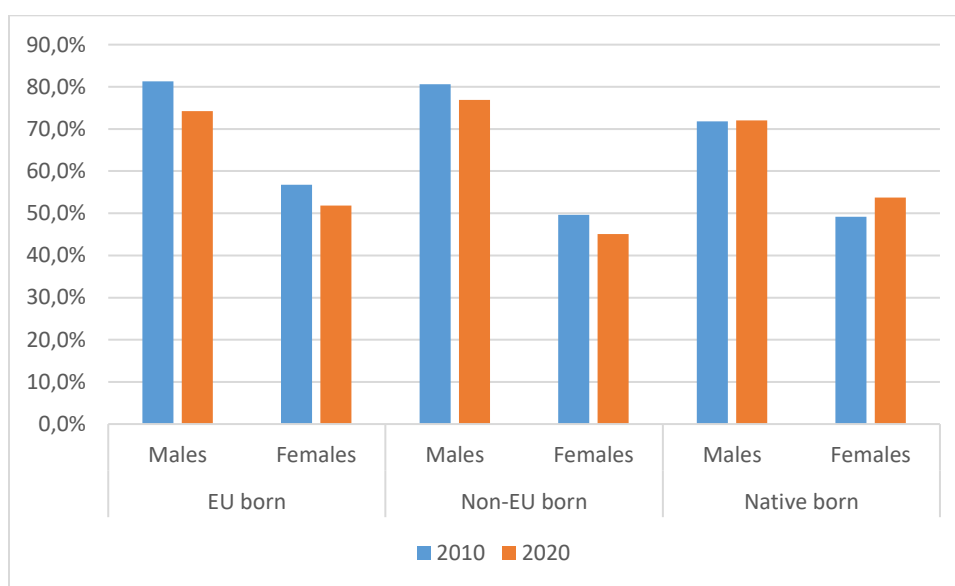


Figure 3.9 The employment rate by gender and country of origin in year 2010 and 2020. Source: Own calculations based on data from Eurostat (Ifsa_ergacob).

The overall employment rate of foreigners and citizens has either remained stable or decreased only slightly. The employment rate rose only among native women. Important trend occurs in the time period presented as women have a significantly lower employment rate than men, regardless of their country of birth. In contrast to the education level of both genders, where in all the population groups women have attained a higher education level than men while the majority of males obtained low education level. Highest employment rate in 2010 has occurred among men born in EU Member States, however that trend has altered and males of Non-EU origins have attained the greatest employment rate in Italy equal to 76,9% that is 2,7 percentage points more than men born in EU Member states and 4,9 percentage points higher than employment rate of native-born male workers. Non-EU born male workers are characterized by their low level of education attainment therefore it is certain that immigrants respond to Italy's labour demand and labour shortages. Also employment among women, while significantly lower than of men, remains relatively similar between three population groups. In 2020 native-born

women contributed for the highest employment rate among females of 53,7% which is 4,5 percentage points higher than a decade ago. Nevertheless, the main group of men born outside the EU with low education level stands for the greatest group of employees in Italy, whereas the employment rate of females of the same origins equals 45,1%, which is 31,8 percentage points less than men.

Therefore, with such great differences in employment of genders, foreigners and native-born workers, it is essential to present the roles that foreigners play on the Italian labour market. Figure 3.9 presents the main sectors of employment of immigrants in Italy in 2020.

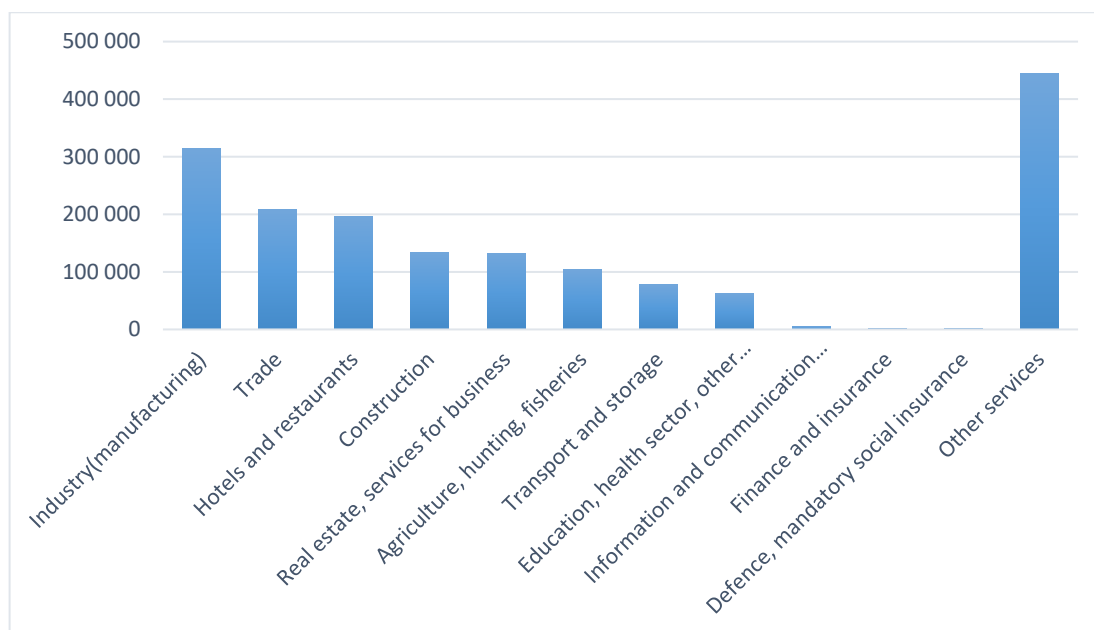


Figure 3.10 Number of foreign citizens working in Italy in 2019, by sector.
Source: Statista 2021

Looking at the employment situation of non-EU workers the highest share of foreign employees is found in industry (manufacturing) sector, that doesn't require a high education level as job positions are often unskilled or low-skilled. Non-EU citizens account for the greatest number of physical and manual workers in low-skilled or unskilled sectors of employment in Italy. They contribute greatly in trade also a high share of foreign workers occurs in hotels and restaurants. They are mostly construction workers, agricultural and fishery labourers. The highest share of non-EU workers is employed in 'other sectors', which stands for the already mentioned domestic work, personal care taker, cleaners and helpers and other manual and low-skilled jobs. Moreover, whereas foreigners employed in manual sectors get paid at a wage, domestic work employees have no minimum wage that is applicable to them. What is visible at first sight is lack of employment of non-EU citizens in any of high-skilled work sectors. Regarding the Italy's labour shortage due to refusal of jobs by Italian youth, immigrants are filling the gap by taking on job with no social status and difficult working conditions.

Therefore immigrants accounting for the greatest share of workers in low-skilled sectors of employment are facing a great deal of obstacles while looking for employment than native citizens. As the overwhelming share of foreign population works in low-skilled sectors where the

specific of work requires little or no training, immigrants constitute as a working population group willing to work for lower wages than native-workers. According to ILO migrant workers earn around 13% on average less than the native workers in high-income countries. In Italy this value is significantly higher as in 2019 the pay gap in hourly wages was equal to 30%, which is an increase from 27% in 2015.

Moreover, while many of working immigrants are staying in the country illegally they become even more vulnerable to the employers' exploitation, who mostly offer low wages, often even lower than the minimum rate, for working long hours in hazard conditions (King, 1993, pp. 283-292).

The solution to this issues is the migrant integration in the labour market that will provide foreign workers with social rights they ought to have. Moreover, it allows to successfully include immigrants in various employment sectors and adjust their employment to obtained education level.

4. THE RELATIONSHIP BETWEEN LABOUR MARKET OUTCOMES AND IMMIGRATION - ECONOMETRIC ANALYSIS

4.1. The sample and data sources.

In this chapter the analysis of immigration effect on labour market will be discussed based on data on labour market and demographics characteristics.

As analysed in previous chapters immigration is a phenomena of great importance both for European Union as well as Italy. Italian labour market may have undergone some significant changes due to Italy being one of the main recipients of immigrant and asylum seekers. The topic of migration has gained one of the highest priority in the last decades. Migration issues have gained significance not only in social and political matters but mainly in the economic sectors.

The impact of migration on labour market is dependent on the education of foreigners and skills of already existing employees as well as the specifics of the host economy. Immigration may affects the labour supply in the host country as migration increases the overall pool of workers. However, the characteristics are likely to alter between the short and long run when the labour demand and economy may adjust to the increase in the labour supply. Therefore a condition for understanding the changes on the labour market as well as the characteristics of migration is to identify and learn about the relations between various variables. What's more, dependencies are constantly undergoing a change due to the flow of time. Capturing and measuring these interactions and monitoring changes are possible, among others by using appropriate methods such as panel models in this case. Panel data contains variables observed in at least two dimensions such as space-time dimension, that is many objects observed in many time periods. Panel data analysis can be performed using estimation of the classical least squares method, the fixed effects model and model with random effects. The study was divided into several stages. In the first one the main variable that may condition the labour market effects of immigration was outlined. Later on more variables that may possibly condition the changes on labour market were added into models.

The aim of the study is to determine the immigration determinants of labour market outcomes using panel analyses with data across years and countries. In order to achieve this aim, analyses were carried out on panel data, where panel models were built using the generalized method of the smallest squares, panel models with fixed effects (FE) and panel models with random effects (RE). Statistics used were within and between variation, Doornik-Hansen test (1994) chi-square and Hausman test. The analysis was conducted using GRETL.

In this section sample composition will be discussed and some descriptive statistics presented. The main aim of the paper is to analyse the labour market outcomes of immigration in Italy, however in order to obtain reliable results of the study, a wider sample was taken under consideration. Estimating the model for only one country without a wide range of data may result in distorted results and compromise final conclusions. Therefore the analysis was conducted amongst 21 European countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Netherlands, Poland, Portugal,

Slovakia, Slovenia, Spain, Sweden, United Kingdom. Initially Luxembourg was taken into account, however taking under consideration the country being one of the least-populous countries in Europe due to its size it boasts an incredible diversity as almost 50% of population doesn't have Luxembourgish nationality. The reference population in the analysis consist of all individuals that have legally gained a residence permit in the host country.

The determinants are analysed in the time period between years 2000 and 2019, their specific characteristics are presented in the table 4.1 below.

Table 4.1 Characteristics of variables used in the analysis

Variable	Designation	Source
Foreign population as % of total population	FPOP	OECD
Employment rate % (the ratio of the employed to the working age population)	EMP	OECD
Unemployment rate % (numbers of unemployed people as a percentage of the labour force)	UNEMP	OECD
Median income in euros	MED_IN	Eurostat
Foreign-born participation rate %	FPR	OECD
Percentage of foreign population with less than primary, primary and lower secondary education attainment level (levels 0-2)	L_EDU	Eurostat
Percentage of foreign population with upper secondary, post-secondary non-tertiary and tertiary education attainment level (levels 3-8)	UT_EDU	Eurostat
Proxy of wage in euros	WAG	Eurostat
Unemployment rate of immigrants	UNEMP_IM	Eurostat

Source: Statistical databases – OECD, EUROSTAT

At the beginning more variables were taken under consideration, however had to be rejected due to inconsistencies in the data availability. Median hourly earnings statistics may have been significant for the analysis, however the data were only collected every four years since 2006, which is not a sufficient database for the research.

The foreign population rate is the percentage of all individuals born outside the host country or born in the host country but holding the nationality of home country presented as the share of the total population of the residence country. Employment rate is the ratio of the employed to the working age population (OECD). On the other hand, unemployment rate presents the numbers of unemployed individuals as percentage of the labour force. Next variable, median income is the middle point of incomes as it divides the distribution of income into two groups, first one having incomes below the average and second one having incomes above the average (Eurostat). Foreign-born participation rate is calculated as the share of unemployed and employed foreign-born individuals aged 15-64 in the total foreign population of the same age (OECD). Proxy of wages was calculated by dividing the total compensation of employees by the total number of employees and adjusted as current wages from constant wages using harmonised index of consumer prices (HICP). The database in this research is constructed out of 21 countries across 20 years, where most of the variables are observed in all time periods, nevertheless some of them may lack certain data due to their absence in the statistical sites such as Eurostat and OECD.

In the first step, basic descriptive statistics and tests of the normality of distribution for quantitative variables were calculated. Shapiro-Wilk tests were performed to test the consistency of the distributions with the Gaussian curve. The results of the calculations are presented in Table 4.2 below.

Table 4.2 Descriptive statistics of variables

	Mean	Median	S.D.	Min	Max	Skewness	Kurtosis	Sharpo-Wilk test
FPOP	6,068	5,300	4,590	0,0000	22,80	0,958	0,834	0,929763
EMP	66,21	66,28	6,351	48,80	78,20	-0,271	-0,705	0,977749
UNEMP	8,835	7,860	4,416	2,02	27,49	1,614	2,939	0,860375
MED_IN	13862	14067	7290	2058	30717	0,194	-1,176	0,946647
WAG	290,8	278,7	146,8	85,27	604,5	0,197	-1,417	0,893077
L_EDU	27,61	32,30	15,93	1,00	54,60	-0,211	-1,315	0,920811
UT_EDU	66,08	67,00	25,02	5,00	99,40	-0,981	0,586	0,87791
FPR	71,33	71,80	6,419	33,30	83,30	-1,976	8,530	0,869561

Source: Own calculations based on data from OECD and EUROSTAT.

Skewness indicates whether most observations are below average or above average as it tells the direction and amount of departure from horizontal symmetry. From the descriptive statistics table it is visible that 4 variables are positively skewed FPOP, UNEMP, MED_IN, WAG, and 4 variables are negatively skewed EMP, L_EDU, UT_EDU and FPR. For the variables UNEMP and FPR data are highly skewed, whereas the FPOP, UT_EDU data are moderately skewed. The data from variables L_EDU, WAG, MED_IN and EMP are approximately symmetric (Brown, 2020, [date of access: 29.10.2021]).

Kurtosis describes the distribution of the variable, or more precisely the degree of its concentration around the mean value. It is used to evaluate how close all observations are to the mean value. The more observations are close to the mean value, then the kurtosis takes values above 0, otherwise below 0. If there is a significant concentration of results around the mean (kurtosis takes a value above 0), we can say that a significant part of the results are similar to each other, and observations significantly different from the mean are few, that us the case with 4 variables FPOP, UNEMP, FPR, UT_EDU. If there is a weak concentration of results around the mean (kurtosis is below 0), we can say that there is a large proportion of results that are far away from the mean, which is the case for EMP, MED_IN, WAG and L_EDU. The distribution in variables FPOP, EMP, MED_IN, WAG, L_EDU and UT_EDU are platykurtic meaning that the distribution produces fewer outliers than the normal distribution. FPR has leptokurtic distribution, meaning it produces more outliers than the normal distribution (Brown, 2020, [date of access: 29.10.2021]).

The Shapiro-Wilk Test is used to test normality. It is more appropriate for small sample sizes (< 50 samples), but can also handle sample sizes as large as 2000. For this reason, we will use the Shapiro-Wilk test as our numerical means of assessing normality. If the value of the Shapiro-Wilk Test is greater than 0.05, the data is normal. If it is below 0.05, the data significantly

deviate from a normal distribution (LAERD Statistics, [date of access: 29.10.2021]). The results of Shapiro Wilk test suggest that the variables are normally distributed.

In order to examine the strength of relationship between the variables used in the regression analysis the correlation matrix was created and is presented in Table 4.2a below:

Table 4.2a Correlation matrix

	FPOP	EMP	UNEMP	UNEMP_IM	MED_IN	WAG	L_EDU	UT_EDU	FPR
FPOP	1,0000	0,1354	0,0373	0,1587	0,2722	0,2740	-0,0477	-0,0967	0,1616
EMP		1,0000	-0,7351	-0,5188	0,4838	0,4261	-0,2511	0,1955	0,2405
UNEMP			1,0000	0,8075	-0,3053	-0,2993	0,2968	-0,1453	0,0261
UNEMP_IM				1,0000	0,0726	0,0484	0,4803	-0,2748	0,0499
MED_IN					1,0000	0,9839	0,3591	-0,3543	-0,0536
WAG						1,0000	0,3720	-0,3855	-0,2507
L_EDU							1,0000	-0,4456	-0,0247
UT_EDU								1,0000	0,1146
FPR									1,0000

Source: Own calculations in GRETL.

Correlation coefficient is a measure of the linear relationship between two variables. Its value ranges between -1 and 1. If it's equal to -1 that means a perfectly negative linear correlation occurs between two variables. Value of 0 means there is no linear correlation between variables. If the correlation coefficient is equal to 1 that indicates that a perfectly positive linear correlation occurs between two variables (Statology, [date of access: 30.10.2021]). .

4.2. Description of the model

As mentioned before, panel data models provide information on individual variable behaviour, both across individuals and over time. The main advantage of these type of data is that they offer more informative data, more variability, less collinearity among the dependent variables, more degrees of freedom and more efficiency in estimation. The data and models have both time-series and cross-sectional dimensions. Panel data can be balanced when all individuals are observed in all time periods or unbalanced when individuals are not observed in all time periods (Katchova, [date of access: 30.10.2021]). Estimating model parameters based on panel data requires the use of methods that make it possible to isolate the differences between objects within the same period and between different ones periods for the same object. Couple panel models are distinguish, the generalized method of the least squares, panel models with fixed effects (FE) and panel models with random effects (RE).

By using panel models the possible effects of immigration on labour market was analysed. In order to achieve this aim the general formula with one explanatory variable was used for different dependent variables. Later on fixed and random effects models were created for four dependent variables with more than one explanatory variable. First model was created without using the fixed effects of variables (1), the second model was used by adding the fixed periodic time effects (2), in the next one the fixed periodic country effects were added (3), however the fixed periodic time effect was removed. The last model was constructed by adding both fixed periodic effects of country and time (4). The analysis allowed to find statistically significant determinants of labour market outcomes (focusing on the role of immigration). Univariate panel data models for each dependent variable are presented below.

Dependent variable: Unemployment rate

$$UNEMP_{it} = \beta_0 + \beta FPOP_{it} + v_{it} \quad (4.1)$$

$$UNEMP_{it} = \alpha_i + \beta FPOP_{it} + \varepsilon_{it} \quad (4.2)$$

$$UNEMP_{it} = \lambda_t + \beta FPOP_{it} + \varepsilon_{it} \quad (4.3)$$

$$UNEMP_{it} = \alpha_i + \lambda_t + \beta FPOP_{it} + \varepsilon_{it} \quad (4.4)$$

Dependent variable: Employment rate

$$EMP_{it} = \beta_0 + \beta FPOP_{it} + v_{it} \quad (4.5)$$

$$EMP_{it} = \alpha_i + \beta FPOP_{it} + \varepsilon_{it} \quad (4.6)$$

$$EMP_{it} = \lambda_t + \beta FPOP_{it} + \varepsilon_{it} \quad (4.7)$$

$$EMP_{it} = \alpha_i + \lambda_t + \beta FPOP_{it} + \varepsilon_{it} \quad (4.8)$$

Dependent variable : Wage

$$WAG_{it} = \beta_0 + \beta FPOP_{it} + v_{it} \quad (4.9)$$

$$WAG_{it} = \alpha_i + \beta FPOP_{it} + \varepsilon_{it} \quad (4.10)$$

$$WAG_{it} = \lambda_t + \beta FPOP_{it} + \varepsilon_{it} \quad (4.11)$$

$$WAG_{it} = \alpha_i + \lambda_t + \beta FPOP_{it} + \varepsilon_{it} \quad (4.12)$$

Dependent variable: Median income

$$MED_IN_{it} = \beta_0 + \beta FPOP_{it} + v_{it} \quad (4.13)$$

$$MED_IN_{it} = \alpha_i + \beta FPOP_{it} + \varepsilon_{it} \quad (4.14)$$

$$MED_IN_{it} = \lambda_t + \beta FPOP_{it} + \varepsilon_{it} \quad (4.15)$$

$$MED_IN_{it} = \alpha_i + \lambda_t + \beta FPOP_{it} + \varepsilon_{it} \quad (4.16)$$

Extended panel data model for each dependent variable are presented below:

Dependent variable: Unemployment rate

$$UNEMP_{it} = \beta_0 + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \beta_5 UNEMP_IM_{it} + v_{it} \quad (4.17)$$

$$UNEMP_{it} = \alpha_i + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \beta_5 UNEMP_IM_{it} + \varepsilon_{it} \quad (4.18)$$

$$UNEMP_{it} = \lambda_t + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \beta_5 UNEMP_IM_{it} + \varepsilon_{it} \quad (4.19)$$

$$UNEMP_{it} = \alpha_i + \lambda_t + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \beta_5 UNEMP_IM_{it} + \varepsilon_{it} \quad (4.20)$$

Dependent variable: Employment rate

$$EMP_{it} = \beta_0 + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + v_{it} \quad (4.21)$$

$$EMP_{it} = \alpha_i + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.22)$$

$$EMP_{it} = \lambda_t + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.23)$$

$$EMP_{it} = \alpha_i + \lambda_t + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.24)$$

Dependent variable: Wage

$$WAG_{it} = \beta_0 + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + v_{it} \quad (4.25)$$

$$WAG_{it} = \alpha_i + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.26)$$

$$WAG_{it} = \lambda_t + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.27)$$

$$WAG_{it} = \alpha_i + \lambda_t + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.28)$$

Dependent variable: Median Income

$$MED_IN_{it} = \beta_0 + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + v_{it} \quad (4.29)$$

$$MED_IN_{it} = \alpha_i + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.30)$$

$$MED_IN_{it} = \lambda_t + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.31)$$

$$MED_IN_{it} = \alpha_i + \lambda_t + \beta_1 FPOP_{it} + \beta_2 FPR_{it} + \beta_3 L_EDU_{it} + \beta_4 UT_EDU_{it} + \varepsilon_{it} \quad (4.32)$$

Where:

y_{it} – dependent variable for i-th country in t-th year where $y=\{EMP, WAG, UNEMP, MED_IN\}$

x_{it} – explanatory variable for i-th country in t-th year where $X =\{FPOP, FPR, L_EDU, UT_EDU, UNEMP_IM\}$

β - a structural parameter expressing the relationship between explanatory variable X and y

v_{it} – vector which is the sum of individual effects u_{it} and independent random factor ε_{it}

α_i –country-level fixed effects

λ_t – time fixed effects

ε_{it} – random effect

The fundamental difference between the random and fixed effects models is the assumptions of the models. Fixed effects models assume that the effect sizes are all estimates of a single true effect size and that the variance between effect sizes is attributable to sampling error only. Random effects models assume that effect sizes are estimates of their own true effect

sizes, distributed around an average true effect, where variance is attributable to both sampling error and 'real' between study variance. Note that if there is only sampling error, the random effects model automatically converges to the fixed effects model.

The application of models is mostly dependent on the primary interest. Fixed effects models are recommended when the fixed effect is of greatest importance as the model assumes that the individual-specific effect is correlated to the independent variable. Whereas, the random effects models are recommended for research where there is no possibility of identifying which individuals belong to which subgroups as the model assumes that the individual-specific effects are uncorrelated with the independent variables (Glen, [date of access: 31.10.2021]). .

4.3. Estimation results

The first stage of the model analysis was to assess the significance of the influence of individual explanatory variables X on the dependent variable Y. The models below show which parameters significantly differ from zero. They are marked with an additional symbol at the end of the line (*). If three asterisks (***) are present, we read it as a significant variable at the level of 1% (0.01). Two asterisks (**) indicate a significance level of 5% (0.05), and one asterisk (*) corresponds to 10% (0.1) (Graphpad, (date of access: 31.10.2021)). The next step was estimating the significance of variables by using the Student's T-Test, which is used to assess to what extent the differences between groups are significant as it provides the information whether those differences could have happened by chance. The next step was assessing the R-square, which is a statistical measure that is used to indicate the extent to which the dependent variable is explained by the explanatory variables in the regression model. In Random Effects Models the within and between variations were considered. Within-group variation refers to variations that are caused by individual effects meaning not all the values within groups are the same. Those differences are not caused by the explanatory variable. The between variations measures the interaction between the groups by using the mean. If means of group don't differ significantly from each other, the between variation will be small (Deater-Deckard et al, 2017).

Another test used was the Hausmann test which in panel models is helpful when it comes to choosing between fixed effects or random effects model. The null hypothesis states that the preferred model is the random effects model. The alternate hypothesis states that the preferred model is fixed effects model. Essentially, the tests estimates whether there is a correlation between the unique errors and the regressors in the model. The null hypothesis states that there is no correlation between the two (Glen, [date of access: 31.10.2021]).

The R square is a statistical measure that represents the proportion of the variance for a dependent variable that's explained by an independent variable or variables in a regression model. However the R square is not very informative while using the random effects model. In panel data analysis the variables significance and overall significance is more reliable.

The first dependent variable for which all the mentioned models were created was the total unemployment rate. The key results are presented in the table 4.3a below.

Table 4.3a Estimation results of the univariate panel data model (eq. 4.1-4.).

Dependent variable: Unemployment rate

	(1)	(2)	(3)	(4)
	Model 4.1	Model 4.2	Model 4.3	Model 4.4
FPOP	0,0808447 [1,177]	0,0910574 [1,318]	0,134617 * [1,725]	0,148059 * [1,888]
Country FE	No	Yes	No	Yes
Time FE	No	No	Yes	Yes
N	388	388	388	388
R-square	0,551			
Within variation	8,90581	8,90581	8,86499	8,86499
Between variation	11,5955	11,3685	11,3369	10,7855
F Statistic	1,55951			
Hausman Test chi(2) p-value	0,184047 0,667918	0,00655191 p = 0,935487	2,22698 p = 0,32841	2,35611 p = 0,307877
Doornik-Hansen test chi(2) p-value	349,701 p 0,00000	263,977 P 0,0000	337,278 p 0,00000	250,011 p 0,00000

Source: Own calculations performed in GRETL based on data from OECD. Following asterisks ***, **, * denote statistical significance at 1, 5, 10% level)

The results of panel models created for the same dependent variable, however with the use of additional control explanatory variables are presented in the table 4.3b below.

Table 4.3b Estimation results of the extended panel data model (eq. 4.17-4.20).

Dependent variable: Unemployment rate

	(1)	(2)	(3)	(4)
	Model 4.17	Model 4.18	Model 4.19	Model 4.20
FPOP	0,0868252 [1,594]	0,100047 * [1,824]	0,126786 * [1,848]	0,145070 ** [2,097]
L_EDU	0,000376071 [0,05487]	0,000530060 [0,07764]	-0,000630405 [-0,09058]	-0,000619741 [-0,08944]
UT_EDU	-0,00304399 [-0,7614]	-0,00306008 [-0,7686]	-0,00295782 [-0,7412]	-0,00296029 [-0,7451]
FPR	-0,0918773 *** [-2,761]	-0,0959045*** [-2,886]	-0,0842405 ** [-2,388]	-0,0870289 ** [-2,474]
UNEMP_IM	0,630200 *** [37,72]	0,629053*** [37,77]	0,631478 *** [37,67]	0,630544 *** [37,76]
Country FE	No	Yes	No	Yes
Time FE	No	No	Yes	Yes
N	221	221	221	221
Within variation	0,937975	0,937975	0,934065	0,934065
Between variation	4,23758	4,24049	4,57147	4,60575
Hausman Test Chi(2) p-value	8,66573 p = 0,123163	6,80423 p = 0,235612	9,34729 p = 0,154968	7,29313 p = 0,294587
Doornik Hansesn chi(2) p-value	8,719 p 0,01278	15,997 p 0,00034	8,188 p 0,01667	15,194 p 0,00050

Source: Own calculations performed in GRETL based on data from OECD. Following asterisks ***, **, * denote statistical significance at 1, 5, 10% level)

The second dependent variable for which models were created was the total employment rate. The key results are presented in the table 4.4a below.

Table 4.4a Estimation results of the univariate panel data model (eq. 4.8).

Dependent variable: Employment rate

	(1)	(2)	(3)	(4)
	Model 4.5	Model 4.6	Model 4.7	Model 4.8
FPOP	0,295296 *** [4,121]	0,296402 *** [4,118]	-0,0250435 [-0,3251]	-0,0267956 [-0,3462]
Country FE	No	Yes	No	Yes
Time FE	No	No	Yes	Yes
N	381	381	381	381
Within variation	8,74123	8,74123	7,3763	7,3763
Between variation	31,7412	33,5309	32,4698	34,3802
Hausman Test: chi(2) p-value	0,154701 0,694082	0,128823 0,719655	1,54411 0,462062	1,45407 0,483341
Doornik Hansen chi(2) p-value	27,262 0,00000	28,574 0,0000	17,205 0,00018	15,454 0,00044

Source: Own calculations performed in GRETL based on data from OECD. Following asterisks ***, **, * denote statistical significance at 1, 5, 10% level)

The results of panel models created for the dependent variable - employment rate , however with the use of additional control explanatory variables are presented in the table 4.4b below.

Table 4.4b Estimation results of the extended panel data model (eq. 4.21-4.24).

Dependent variable: Employment rate

	(1)	(2)	(3)	(4)
	Model 4.21	Model 4.22	Model 4.23	Model 4.24
FPOP	0,133870 [0,9751]	0,130049 [0,9340]	0,0293790 [0,1681]	0,0212397 [0,1191]
L_EDU	-0,00696777 [-0,4061]	-0,00667884 [-0,3891]	-0,00398700 [-0,2291]	-0,00366906 [-0,2108]
UT_EDU	0,00636216 [0,6332]	0,00617448 [0,6146]	0,00600355 [0,5976]	0,00580063 [0,5776]
FPR	0,357764 *** [4,221]	0,360400 *** [4,216]	0,331865 *** [3,716]	0,334267 *** [3,713]
Country FE	No	Yes	No	Yes
Time FE	No	No	Yes	Yes
N	220	220	220	220
Within variation	5,97156	5,97156	5,97482	5,97482
Between variation	31,3845	33,6638	32,221	34,7772
Hausman Test chi(2) p-value	5,04076 0,283141	4,74474 0,314505	5,57958 0,349299	5,18518 0,393701
Doornik Hansen chi(2) p-value	25,647 0,0000	23,426 0,00001	25,496 0,00000	22,050 0,00002

Source: Own calculations performed in GRETL based on data from OECD. Following asterisks ***, **, * denote statistical significance at 1, 5, 10% level)

Next dependent variable for which models were created was the wage of employees. The key results are presented in the table 4.5a below.

Table 4.5a Estimation results of the univariate panel data model (eq. 4.9-4.12).

Dependent variable: Wage

	(1)	(2)	(3)	(4)
	Model 4.9	Model 4.10	Model 4.11	Model 4.12
FPOP	3,59770 *** [4,051]	3,56456 *** [4,013]	1,62292 ** [1,975]	1,59392 * [1,940]
Country FE	No	Yes	No	Yes
Time FE	No	No	Yes	Yes
N	230	230	230	230
Within variation	225,402	225,402	174,866	174,866
Between variation	21803	22242,7	22999,3	23451,5
Hausman Test: chi(2) p-value	0,498789 0,480033	0,182811 0,668969	0,926385 0,629271	0,539836 0,763442
Doornik Hansen chi(2) p-value	41,509 0,0000	34,831 0,00000	47,349 0,0000	40,996 0,0000

Source: Own calculations performed in GRETL based on data from OECD. Following asterisks ***, **, * denote statistical significance at 1, 5, 10% level)

The results of panel models created for the dependent variable - wage , however with the use of additional control explanatory variables are presented in the table 4.5b below.

Table 4.5b Estimation results of the extended panel data model (eq. 4.25-4.28).

Dependent variable: Wage

	(1)	(2)	(3)	(4)
	Model 4.25	Model 4.26	Model 4.27	Model 4.28
FPOP	5,77879 *** [5,129]	5,74175 *** [5,101]	5,05460 *** [3,689]	5,01384 *** [3,662]
L_EDU	0,0284457 [0,2760]	0,0274323 [0,2670]	0,0443570 [0,4255]	0,0434277 [0,4178]
UT_EDU	-0,0819618 [-1,432]	-0,0816942 [-1,431]	-0,0849222 [-1,486]	-0,0846703 [-1,486]
FPR	1,07302 * [1,650]	1,09979 * [1,694]	0,896540 [1,320]	0,921679 [1,360]
Country FE	No	Yes	No	Yes
Time FE	No	No	Yes	Yes
N	177	177	177	177
Within variation	161,738	161,738	161,993	161,993
Between variation	15011,4	16160,4	16090,6	17418,6
Hausman Test: chi(2) p-value	10,5229 0,0324827	9,42198 0,0513754	9,89819 0,0781721	8,79935 0,11734
Doornik Hansen chi(2) p-value	24,587 0,0000	23,935 0,00001	25,585 0,00000	25,018 0,0000

Source: Own calculations performed in GRETL based on data from Eurostat. Following asterisks ***, **, * denote statistical significance at 1, 5, 10% level)

Next dependent variable for which models were created was the median income. The key results are presented in the table 4.6a below.

Table 4.6a Estimation results of the univariate panel data model (eq. 4.13-4.16).

Dependent variable: Median Income

Variable	(1)	(2)	(3)	(4)
	Model 4.13	Model 4.14	Model 4.15	Model 4.16
FPOP	785,441 *** [12,73]	784,663 *** [12,69]	197,952 *** [4,337]	198,811 *** [4,375]
Country FE	No	Yes	No	Yes
Time FE	No	No	Yes	Yes
N	342	342	342	342
Within variation	3,70449e+006	3,70449e+006	1,35411e+006	1,35411e+006
Between variation	5,08814e+007	5,19462e+007	4,624e+007	4,66603e+007
Hausman Test: chi(2) p-value	1,95939 0,161579	2,43627 0,118558	4,44145 0,10853	4,52912 0,103876
Doornik Hansen chi(2) p-value	7,768 0,02057	9,407 0,00907	49,226 0,0000	43,064 0,0000

Source: Own calculations performed in GRETL based on data from Eurostat. ***, **, * denote statistical significance at 1, 5, 10% level)

The results of panel models created for the dependent variable – median income , with the use of additional control explanatory variables are presented in the table 4.6b below.

Table 4.6b Estimation results of the extended panel data model (eq. 4.29-4.32).

Dependent variable: Median income

Variable	(1)	(2)	(3)	(4)
	Model 4.29	Model 4.30	Model 4.31	Model 4.32
FPOP	980,042 *** [12,98]	980,011 *** [12,95]	562,122 *** [6,118]	559,982 *** [6,078]
L_EDU	-15,8102 * [-1,789]	-15,8710 * [-1,797]	-7,63224 [-0,9507]	-7,69828 [-0,9596]
UT_EDU	-4,13646 [-0,8056]	-4,10177 [-0,7992]	-4,93098 [-1,070]	-4,89973 [-1,064]
FPR	148,176 *** [3,048]	148,849 *** [3,058]	44,7707 [46,4898]	45,2681 [0,9732]
Country FE	No	Yes	No	Yes
Time FE	No	No	Yes	Yes
N	221	221	221	221
Within variation	1,49992e+006	1,49992e+006	1,22928e+006	1,22928e+006
Between variation	4,49213e+007	4,72463e+007	4,73891e+007	5,02284e+007
Hausman Test: chi(2) p-value	10,3606 0,0347722	10,1377 0,0381705	7,28005 0,200632	6,91411 0,227107
Doornik Hansen chi(2) p-value	8,236 0,0162741	9,570 0,00835	16,492 0,00026	17,455 0,00016

Source: Own calculations performed in GRETL based on data from Eurostat. Following asterisks ***, **, * denote statistical significance at 1, 5, 10% level)

4.4. Key findings and possible extensions

The first step in assessing the quality of the econometric model is the assessment of the significance of the influence of individual explanatory variables on the dependent variable. For this purpose, Student's t-test of significance of the α_j parameter. The null hypothesis for this test has the form $H_0: \alpha_j = 0$, with the alternative hypothesis $H_1: \alpha_j \neq 0$. If three asterisks (***) are present, we read it as a significant variable at the level of 1% (0.01). Two asterisks (**) indicate a significance level of 5% (0.05), and one asterisk (*) corresponds to 10% (0.1). . By interpreting the Hausman test the p-values in all four models are higher than 0.05 therefore there is no reason for rejecting the null hypothesis so the preferred model is random effects model. In all the models created both with one explanatory variable as well as models with additional control variables the results of Hausman test suggest that there is no reason for rejecting the null hypothesis and random effects model is the preferred one. What's more in all the models created the between variance is significantly higher than the within variation which in valid random effects model indicates that the model explains better the between countries over time than intra-country variation.

In the panel models where the unemployment rate is the dependent variable with one explanatory variable, which is foreign population the significance of the influence of the explanatory variable is at 10% significance level. However the significance of the influence of explanatory variable occurs only in the random effects model with fixed time variable and fixed time and country variables

In the panel models created for the same dependent variable (unemployment) with the use of more explanatory variables, which are immigrants' unemployment (UNEMP_IM), foreign participation rate (FPR), percentage of foreign population with less than primary, primary and lower secondary education attainment level (L_EDU), percentage of foreign population with upper secondary, post-secondary non-tertiary and tertiary education attainment level (UT_EDU). According to the Hausman test results the null hypothesis was not rejected and the random effects models were preferred for the analysis. In the first random model without fixed country nor fixed time effects the foreign participation rate and immigrants' unemployment rate are statistically significant at the 1% significance level. In the model with country fixed effect the two mentioned variables possess the same statistical significance level, whereas foreign population is statistically significant at the 10% significance level. In the last two models the significant variables were of the same statistical importance, only the significance level of foreign population variables has changed from 10% to 5%.

In the next models for employment rate, foreign population is statistically significant at the 1% level only in the model with no fixed effects and model with fixed country effects. In the later models foreign population has no significance on the employment rate. Based on the Hausman test there was no reason for rejecting the null hypothesis so the preferred model is random effects model. For the employment rate four more models were created with additional control variables FPOP, L_EDU, UT_EDU, FPR. In all the models foreign population rate was statistically significant at the 10% level of significance, independently from created models.

Foreign population has a statistical significance on wage in all the models. The variable has the highest level of significance of 10% in the random effects model with fixed country and time effects. In the random effects model with only fixed time effect the foreign population was significant at 5% In other two models the significance fell to 1%. Analysing the following models with additional control variables FPOP, L_EDU, UT_EDU, FPR only two variables are statistically significant for the dependent variable those two being foreign population with 1% significance in all four models and foreign participation rate with 10% significance level in simple random effects model and random effects model with fixed country effects.

Foreign population also has a 1% statistical significance in all models with only one explanatory variable in four models with median income as dependent variable. For the following four models were created with additional control variables FPOP, L_EDU, UT_EDU, FPR, where foreign population is statistically significant on 1% level in all four models. Percentage of foreign population with less than primary, primary and lower secondary education attainment level (levels 0-2) was significant at 10% level in random effects models and random effects model with fixed country effects. Whereas the foreign participation rate is significant at 1% level in the two mentioned models. Foreign population, foreign participation rate and the percentage of foreigners with low education attainment level turn out to be of most significance while analysing the effects of immigration on the labour market. Across all the models foreign population was significant when it came to the unemployment rate. The results suggest that unemployment rate is more susceptible to change under various circumstances, those being the unemployment rate of immigrants, foreigners participation rate and foreign population, which is understandable taking under consideration the influx of immigrants to Italy in recent years. Knowing that the unemployment among immigrants in Italy is higher compared with native's unemployment rates. The employment rate on the other side is less susceptible to the same determinants. Only foreign participation rate and foreign population are of significance. The proxy of wages is more susceptible to the same determinants as employment rate.

Having analysed the models some possible extensions of the analysis should be discussed. The estimated models did not take into account the problem of endogeneity, which is related to the correlation between independent variable and unknown causes represented by the error component in the model (disturbances). If the relationship between the predictor (X) and the dependent variable (Y) is partially explained by other (unknown) variables (e), therefore the independent variable (X) is an endogenous variable and the effect of X on Y is not defined. Therefore a possible solution might be an implementation of instrumental variables.

SUMMARY

The phenomenon of migration has gained a great deal of importance in recent years due to its immense impact on various sectors. Population movements have been influencing social, cultural, economic as well as political domains, moreover they affect the demographic structure of society and the supply of labour. Patterns of migration have significantly changed due to various political and social events for example the fall of the Iron Curtain which was followed by opening many borders of Eastern Europe, moreover the end of Cold War and political conflicts resulted in an increase in asylum seekers. What's more important opening the borders of European Union has contributed to enhanced migration flows. Consequently, many countries have started to perceive human mobility not only as a mean to gain significant economic benefits but also as a way to fight unemployment. Italy, previously a country of emigration with relatively high unemployment, has become one of the main foreign labour importers. Italy may be seen as attractive country for migrants perceiving to settle down and find employment as it is one of the Member States of European Union, meaning its more accessible to enter. The education attainment level along with skill profile of immigrants arriving to Italy is of great importance as it influences their employment opportunities. However, employment of foreigners depends on many factors besides their education level, mostly on labour market demands. In sectors connected with harsh working conditions, lower pay and the physical nature of the work, the labour shortages are undeniably high. Therefore as immigrants mostly possess a less than primary, primary or lower secondary and upper secondary and post-secondary non-tertiary education attainment level they tend to work in the low-skilled employment sectors such as: domestic sector, agriculture, manufacturing, accommodation and food services, mining, cleaning services. According to the available data men account for the highest share of working age persons and they are mostly employed in low-skilled sectors. Nevertheless, demographic structure of immigrants consists of people mainly in working age, where the share of women and men is equivalent. Men come mostly from Africa and Asia, where women come from North and South America and centre and eastern countries of Europe. However the employment of women is significantly lower than that of men. Despite immigrants working in the sectors characterized by labour shortages, the unemployment rates of immigrants are still the highest in the country and has only fallen down slightly throughout ten years. According to the results of performed analysis where possible correlations between foreign participation rate, unemployment and employment rate, foreign population, wages and median income were analysed using panel data models with fixed effects of country and time between 21 countries across 20 years, some of the variables may indeed be connected. The foreign population is of most significance in examining the changes of unemployment rate, wage and median income. As mentioned before the unemployment rate is the highest among immigrants, therefore an increase in foreign population may affect in rise of total unemployment rates if immigrants do not manage to find the employment or changes in the labour demand occur. Wage and median income are also connected to foreign population, however not as strongly as unemployment rate. The connection between foreign population and wages depends on the education and both of natives and immigrants. The low

education attainment level of is significant for the Median income. In both situations skills and education both of natives and migrant workers are of significance. Skills of natives and immigrants can either be complementary or substitutes. If skills are substitutes an increase in the competition on the labour market will arise at the same time probably lowering median income, if they are complementary then in the result the overall productivity increases and leads to rise of incomes. Perhaps the most important variable is foreign participation rate that turns out to be of great significance for all the dependent variables those are: unemployment and employment rates, wage and median income. As a measure of economic active workforce it contributes to the assumption that the despite the relatively high unemployment rates across immigrants, the share of active foreigners is of significance in the labour market. Moreover it may be beneficial as the active foreigners respond to the country's labour demands.

In conclusion, immigration is not a new phenomenon, however it has started to bring attention as it may be a possible solution to the ageing population issue of both Italy and European Union. The labour market demands and shortages are met by the foreign workers, which according to the analysis are of significance for the labour market in Italy, however mostly in beneficial way. The employment rates and wages of natives are not exposed to changes regardless of the number of immigrants. Only unemployment may feel the effects of the foreign population changes, however that mostly concerns already existing immigrant workers as the unemployment rates of natives in Italy have been steady in recent 10 years. The only variable suffering from changes may be median incomes which are exposed to changes in foreign population.

Migration will remain a main topic of political debates during the coming years. The social inclusion of migrant population from developing or underdeveloped countries in developed countries of EU, such as Italy, will take a great deal of time. Europe's role as a main destination of immigrants is undeniably significant. The rapidly increasing number of displaced population, labour migration, global refugees, political changes, wars and conflicts causes complex global challenges that have to be addressed.

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