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"FISCAL IMPACT OF MIGRATION IN HOST COUNTRIES"

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INTRODUCTION

Nowadays more and more migrants choose European countries as their main destination.

Eurostat data, in fact, shows a relentless upward trend of migration inflows since 2010.

The recent financial crisis and the ageing of native population has enhanced the negative public attitudes toward foreigners. The widespread perception is that they represent an expenditure for the State Budget of a country: on the one hand they benefit more in public transfers, on the other they contribute less in taxes, further exacerbating the general government imbalance.

The aim of the dissertation is to study whether and to what extent immigrants contribute in fiscal terms to the State Budget of the country they decide to settle in.

The thesis is organized as follows.

Chapter 1 outlines the phenomenon at global, European and Italian level over the last decade using a demographic, economic and social perspective. More specifically, data about flows and stocks of immigrants are reported and the main countries of origin and destination are investigated. Moreover, a brief historical overview is presented starting from the discovery of Americas to the entry of Eastern countries in the EU.

Chapter 2 is entirely dedicated to the analysis of the fiscal impact of migration in destination countries both at household and overall level. In particular we consider the average annual net contributions computed as the difference between General Government revenues and expenses. The study is conducted for Europe (i.e. comparisons among EU countries are performed), Italy and Lombardia region. We decided to focus on this region in order to get insights on which nationalities of immigrants affect positively or negatively the regional State Budget.

Chapter 3 investigates to what extent the Italian pension system benefits from foreigners' contributions. The reason why we analyze this aspect refers to the fact that social security contribution is the largest component of general government revenues paid by immigrants. Specifically, estimates about the number of native pensions (computed as total annual social security contributions paid by foreigners over the average per capita Italian pension income)

funded by immigrants are provided. Furthermore, projections about the future non-native retirement flows until 2025 are illustrated.

Finally, to assess the long run sustainability of benefits exercised by foreigners on the Italian pension system we report results of the sensitivity analysis conducted by Ragioneria Generale dello Stato.

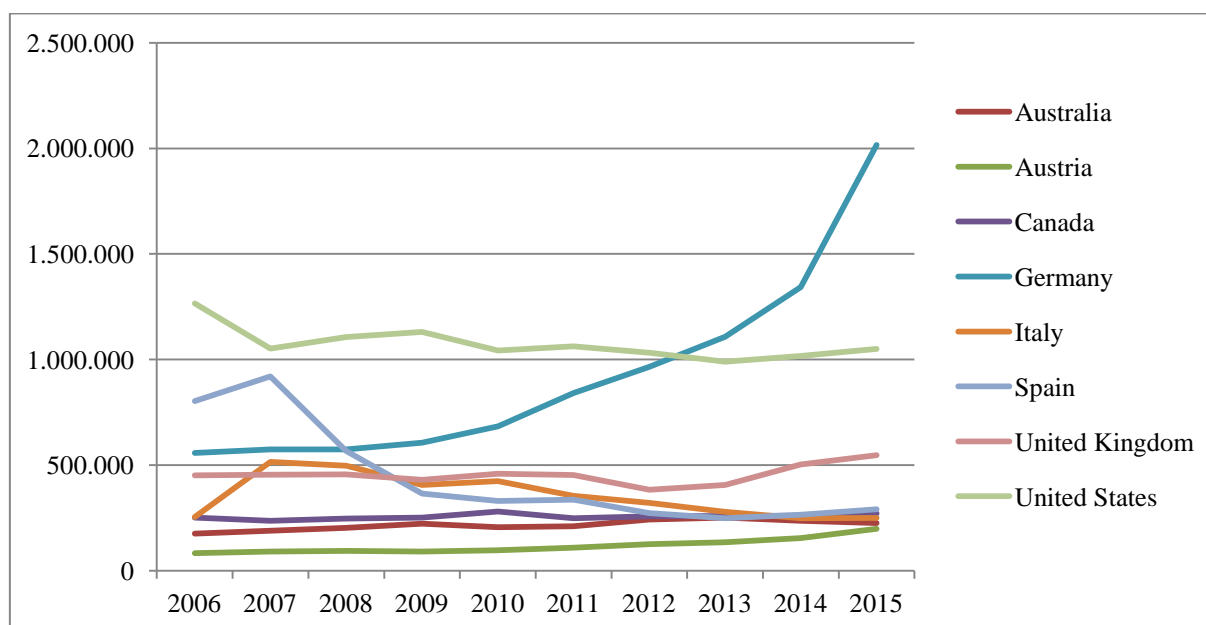
CHAPTER 1. MIGRATION FLOWS AND STOCKS.

DEMOGRAPHIC, ECONOMIC AND SOCIAL PERSPECTIVE

1.1 Recent developments of migratory flows with a brief historical overview

According to OECD estimates, in 2015 **migration flows** reached the highest share in Germany with 2 million of inflows and in US with 1 million. Unlike the previous year, these flows have suffered slight variations in many OECD countries, except for flows to certain European countries. In fact, although Germany is the country that hosts more immigrants since 2013, in 2015 it saw an increase of these flows of about 50% more than the previous year. Analyzing data by citizenship comes out that these flows are characterized by a variety of provenances. In fact whereas on one side there are immigrants from other EU countries that enjoy the freedom of movement such as Romania, Poland and Italy, on the other side we find migrants that come from those countries overrun by wars or other similar facts like Syria and Afghanistan.

Figure 1.1. Top migration inflows in OECD countries



Source: our elaborations on International Migration Database

The arrival of migrants from these latter countries has given rise to a real refugee crisis that in 2015 has had a dramatic deterioration, affecting as it has never done before, migration flows to some OECD countries. This probably justifies the increasing number of flows to Germany

which appears to be the first country that hosts refugees. Suffice to say that in 2014 there were 65.000 new arrivals from Syria and that in 2015 the value has doubled. At this point is natural to ask what is the reason that drives these refugees to reach some countries like Germany, France, UK, Sweden rather than others. Although these reasons may differ from person to person, the main reasons appear to be of economic nature, namely that migrants move to countries where there are more job opportunities; the political¹ ones, namely that migrants move to countries on which they can have more probabilities to obtain some form of political protection; or for those grounds concerning the family networks already settled in the arrival country.

In 2015, according to UN's available data², the number of **stock international migrants**³ worldwide reached about 244 million, equal to the 3.3% of the total population. Of these, based on UNHCR's statistics, 65.3 million are forced migrants, i.e. those persons forced to migrate owing to persecutions, conflicts, violence and human rights violation. In particular, inside this category, it is possible to recognize three different status. The first is the refugees⁴ status, which reached about 21.3 million in 2015, the second is asylum-seekers⁵ status to which belong about 3.2 million of migrants and the third is IDPSs⁶ with about 40.8 million of individuals. In particular, as regards asylum-seekers, about 54% of them came mainly from 3 countries: Syria, Afghanistan and Somalia⁷.

From the geographical point of view, of the 244 million of international migrants, 104 million were born in Asia. Europe was the second largest **origin continent** with 62 million of migrants, followed by Latin America and Caribbean with 37 million, Africa with 34 million, North America with 4 million and Oceania with 2 million. At country level, India is the largest origin country with 16 million of individuals, followed by Mexico with 12 million, Russian Federation with 11 million, China with 10 million, Bangladesh with 7 million, Pakistan and Ukraine with 6 million.

¹ Not coincidentally Germany and Sweden seem to have granted the most of asylum requests in recent years.

² The dataset presents estimates of international migrant by age, sex and origin. Estimates are available for all countries and areas of the world. The estimates are based on official statistics on the foreign-born or the foreign population.

³ person who changes his or her country of usual residence.

⁴ Individuals fled or expelled from their origin country owing to political, religious or racial discrimination, or a war, which are hosted in a foreign country which legally recognizes its status and protect it through political asylum.

⁵ Individuals seeking International protection in a foreign country, whose applications have not yet been accepted by destination country.

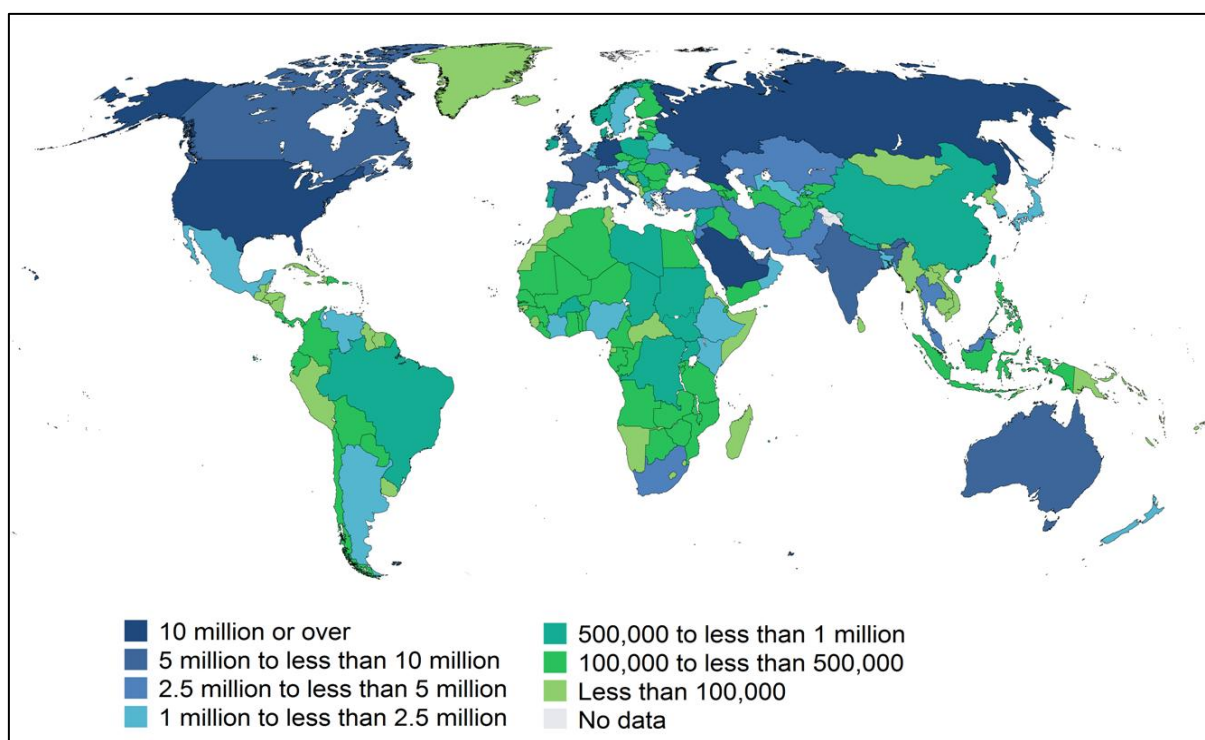
⁶ Internally Displaced Person: person forced for several reasons to leave his home to move towards other places, without crossing international borders.

⁷ Unlike what one thinks, they mainly go to Turkey, Pakistan, Lebanon, Islamic Iran, Ethiopia and Jordan.

As regards the **continents of destination**, Europe hosts the greater quantity of international migrants with 76 million of them, followed by Asia with 75 million of individuals immigrated. The third largest host country is the North America with 54 million of migrants, followed by Africa with 21 million, Latin America and Caribbean with 9 million and at last Oceania with 8 million.

Restricting the analysis at country level, is important to notice that in 2015, two thirds of all international migrants are living in just 20 countries (Figure 1.1). The largest number of international migrants live in the United States (47 million)⁸, followed by those that live in Germany (12 million⁹) and Russian Federation (12 million)¹⁰ and Saudi Arabia (10 million)¹¹.

Figure 1.2. Countries of destination per stock of international migrants, 2015



Source: UN Department of Economic and Social Affairs

The largest **international migration corridors** are those characterized by movements within the same continent, as in the case of Asia-Asia routes with 59.4 million flows and Europe-Europe routes with 39.9 millions of movements. Latin America and Caribbean-North America is the third largest corridor with 24.6 individual movements, followed by Asia-Europe (20.2

⁸ Mainly from Mexico (12 million), China (2 million), India (1.9 million), Philippines (1.8 million).

⁹ Mainly from Poland (1.9 million), Turkey (1.6 million), Russian Federation (1 million).

¹⁰ Mainly from Ukraine (3.2 million), Kazakhstan (2.5 million) and Uzbekistan (1.1 million).

¹¹ Mainly from India (1.8 million), Indonesia (1.2 million) and Pakistan (1.1 million).

million), Asia-North America (15.5 million), Africa-Africa (16.4 million) and Africa-Europe (9.9 million).

Women constitute slightly less than half of all international migrants (48%), mainly from Africa and Asia where migrants are predominantly men, but women make up the majority of international migrants in Europe (52.4%) and North America (51.2%).

In 2015 most of international migrants are in working age, in fact 177 million of them (72%) are between ages 20-64 , with the median age equal to 39 years old. Yet in some of major destination countries, the migration stock is becoming younger, as in the case of Asia, Latin America and the Caribbean, and Oceania.

As mentioned above, today United States are the main destination country of international migrants, but as will be seen below, they have had and maintained the primacy also in the past years in absolute terms, despite the different migratory dynamics.

It is therefore interesting to retrace the history of migration flows, which in this paper is divided into seven historical periods.

The **first** period covers the years from the discovery of the Americas to 1820. The discovery of the New World has in fact led to the launch of the transatlantic migration towards this continent, constitute for 82% of cases by African slaves, Europeans servants and convicts, and for 18% as free men.

The **second** period covers the years beyond 1820 until the period before the outbreak of World War I. The improvement of communication system and the reduction of transport costs have meant that also less wealthy individuals and free men could move towards new horizons, launching from 40s the **mass migration**. During these years, 60 million of individuals came from Europe, whose migration rose from 300.000/year until the end of 70s for then reach the 1 million/year during the last decade of '800. The main European origin countries were United Kingdom and Germany at first, but after also Scandinavia and Nord Europe, and only in the end of the century migrations also began from South and East European countries. Regarding the main destination countries even in the age of mass migration America resulted to be the main continent country, in particular towards the US, followed only in the last years of 800 of migration towards South America (Argentina, Brazil and Canada) and Australasia.

The **third** period encloses the Two World Wars. The outbreak of the First World War, the subsequent Great Depression and the adoption of restrictive policies¹² by US, have placed end to mass migrations from European countries, particularly of those from South and East Europe.

¹² I.e. literacy tests and annual quotas for foreigners.

The **fourth** period, which covers the Second postwar period until the early 70s, sees a new turning point in the migratory dynamics. In particular, although the main destination countries started to recover shares of immigrants lost during the Wars and to remain the main countries of settlement, they never reached the Pre-War levels. This is probably due to the economic boom of 60s which transformed the West Europe from the main country of origin of migrants to main country of destination. This economic boom has in fact induced some European countries¹³ to open their labour markets to foreign¹⁴ manpower through active recruitment programs of so-called “guest-workers”, in order to offer a temporary response to the labour market needs. For this reason migration to European countries increased from 4 million during 50s to 10 million in the 70s. But, in addition to the European dynamics, even in America the situation was slowly changing since Latin America was converting from immigration country to emigration country¹⁵.

The **fifth** period covers the Oil Shock (1973), which caused a change of direction of migration flows from the geographical point of view. In fact this shock, with the economic recession and the adoption of restrictive policies¹⁶ by some European countries, reduced flows to North Europe shifting the horizon towards Southern Europe countries¹⁷ which for this reason were transforming from emigration countries to immigration countries. This shift was caused also by the end of colonialism in Africa and Asia and the improvement of living conditions of many former European colonies which allowed to these citizens to return to the motherland¹⁸. Simultaneously Latin America continued to be a country of emigration and US to be the main destination country in the world.

The fall of the Berlin Wall in 1989 marked the beginning of the **sixth** period of migration which together with Dissolution of the Soviet Union and conflicts in former Yugoslavia caused the establishment of large intra-European migration flows. This flows came mainly from the Eastern countries¹⁹ to UE-15 countries, but also to America, Israel and Russian Federation. This period seen also the establishment of another migration route, which was that towards the Persian Gulf due to a high demand of foreign manpower (mainly from Asia).

The **seventh** and last period of history of international migration flows started in 2004 with the European enlargement to Eastern countries²⁰ together with Malta and Cyprus. This new

¹³ Such as Germany, France, United Kingdom Switzerland, Belgium and Holland.

¹⁴ Mainly from South Europe and North Africa.

¹⁵ Towards US and Europe.

¹⁶ Interruption of recruitment programs and the adoption of restrictive policies designed to promote the return of foreign workers to their source country.

¹⁷ Italy, Spain, Portugal and Greece.

¹⁸ This is the case of migrations to France, United Kingdom, Holland, Belgium and Germany.

¹⁹ Such as Poland and Romania.

²⁰ Eight countries of the former Soviet Union (UE-8).

openness has raised new fears of large migration flows into the EU-15 countries, forcing these countries to adopt substantial transitional arrangements, by prohibiting the access for almost seven years to the new EU citizens. Only United Kingdom, Ireland and Sweden didn't recourse to these measures with the consequence of attract the new European citizens towards these countries. To prove that the fears of the countries that have adopted restrictive policies towards the new European citizens were sank, there are European migrations, which despite increased from 893.000 in 2003 to 1.91 million in 2007, about 60% of these flows went to the UK and Ireland. Despite these European flows, US maintained the highest migration stock in the worldwide.

1.2 Push and pull factors of migration

The identification of causes concerning the migratory phenomenon is structurally connected to the discovery and the interpretation of social phenomena. This requires the research of a plurality of causes to explain what forces interact with the migratory fact, requiring therefore a very careful analysis.

According to Censis report (2000), the **determinants of migratory phenomenon** are divided into 5 macro-groups: socio-economic, demographic and socio-political, the policy and military conflict ones, the natural and environmental ones and lastly, the economic and social globalization phenomenon ones.

The category of **socio-economic determinants** includes most of the causes. In fact, within it, the main items turn out to be those related to wage issues, such as income inequality between countries or in the distribution of resources, or those related to more general aspects, such as conditions and expectancy of life, feeding and health conditions, cost of living index or the availability/unavailability of consumption goods.

The second group of determinants are those related to **demographic and socio-political conditions**. In particular, this category covers facts surrounding the relationship between demographic growth and that of labour market. In fact the greater is the imbalance between population growth and that of the economy of one country over another, the greater will be the migratory pressure that will be created among countries involved. Among the political and social conditions, shall be considered unemployment, social tensions related to labour-market conditions, the shortage of public services such as health, social assistance and those conditions related to the access to education system.

The **third** category of migration flows determinants covers issues related to the policy, issues related to wars and public disorders. Therefore this category covers situations ranging from the violation of political and religious freedom by some non-democratic regimes, to personal or social persecution, to armed conflict and internal strife, justifying these latter the mass migration from some countries and the development of refugees asylum seekers.

Table 1.3. Push and Pull factors of migration flows

Push factors	Pull factors
Not enough jobs	Job opportunities
Inadequate conditions	Better living conditions
Natural disasters	Attractive climate
Famine/drought	Welfare
Poor medical care	Better medical care
Loss of wealth	Gain of wealth
Desire for more political/religious freedom	Feeling of having political and religious freedom
Discrimination	High expectancy life index
War	Industry
Deaths threats	Security
Lack of good quality of education	Good quality of education

Source: our elaborations

The natural and environmental phenomena creates the **fourth** category. Environmental degradation and the adverse weather conditions such as floods, earthquakes, drought and desertification can easily affect both the working conditions of an individual and his living conditions²¹. For this reasons, in fact, migration can be generated by the occurrence of some disastrous natural events.

Economic and social globalization phenomenon represents a separate group, classified as the **fifth** category of migration flows causes. This category tends to divide two types of migration: migration of qualified workers who are looking for more developed economies and those of unskilled workers who are searching for new employment opportunities. In particular, determinants of this category, unlike of the others, lead to change the country of origin and destination of migration flows over the years.

At this point, after identifying the major macro-determinants of migration, it is possible to split these macro-reasons on push and pull factors, as shown in the Table 1.3. Push factors are those that, within a country, push an individual to emigrate, while pull factors are those that within a country, attract foreign people.

²¹ Such as famines.

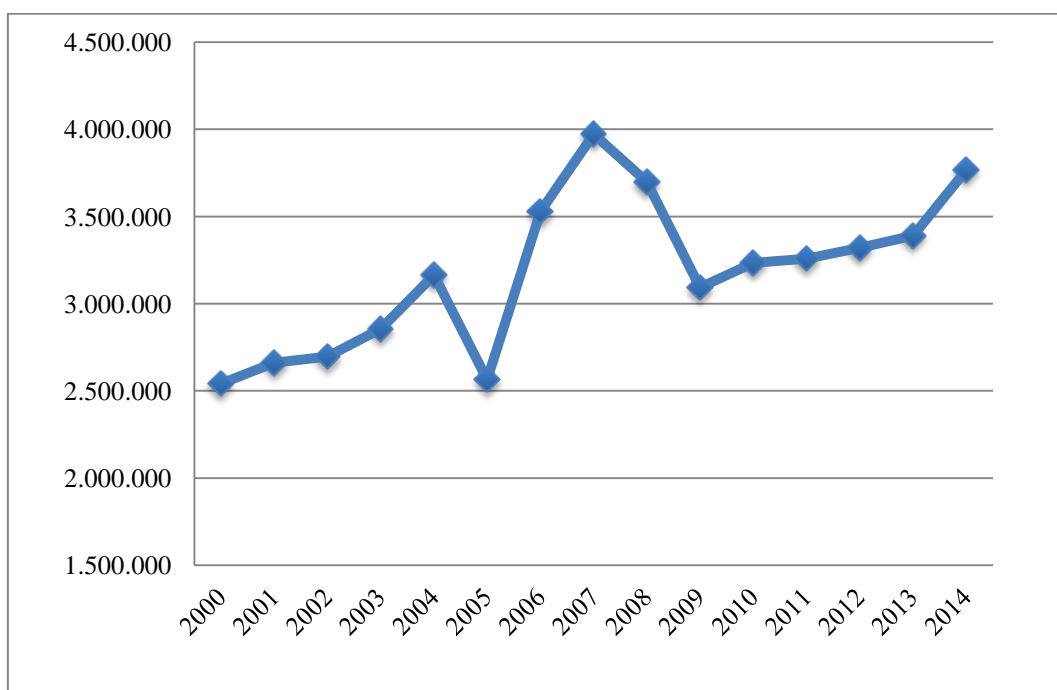
1.3 A portrait of foreign population in the European Union

Describing immigrants in the European Union, it was chosen as representative category of migrants the foreign population (instead of foreign-born used for example in Australia and United States, even if there are small differences among the two categories) because in the EU most of countries accumulates data according to citizenship.

The concept of foreign population includes resident persons born abroad who maintained citizenship in their origin country. To determine to which extent persons may or may not be of foreign nationality it depends both on citizenship legislation and what incentives on naturalization can have foreigners in the EU. For this analysis are used data from Eurostat, EU-LFS and EU-SILC²² considering 2008 as reference year²³.

For the category considered here, it is necessary first of all make a brief description on **migration flows**, since foreign resident population has been first and foremost the main actor of these flows.

Figure 1.4. Migration inflows in the EU



Source: our elaborations on Eurostat database

²²Eurostat: data on migration flows, stocks by citizenship or country of birth, based on population registers or registers of resident foreign citizens, on sample of surveys or on a combination of data sources.

EU-LFS: data on employment, unemployment and features of workers based on foreign resident population over 15 years old or on private households.

EU-SILC: data on income, social integration living conditions, education and health.

²³ 2008 is the referred year because is the reference year of the research on the fiscal impact of migration on the public budget of destination country analysis carried out in the second chapter.

In the first decade of 2000, migration flows reached the minimum peak in 2005 with 2.6 million, but already restarted to increase in the following years, reaching the maximum peak in 2007 with about 4 million of people. Then the trend of flows restarted to be negative, probably due to the crisis that between 2008 and 2009 affected the economy of many countries, also creating a momentary break on migration flows. These flows started to rise again from 2010 (Figure 1.3), but never reaching the peak of 2007 to date.

In 2008, 3.7 million of persons migrate in the EU-27²⁴ on which about 2 million from other European countries and the remaining 1.7 million from non-member countries. The main European source country is Romania (384.000), followed by Poland (265.000), Bulgaria (91.100) and Germany (88.000), whereas the other non European source country are Morocco (157.000), China (97.000), India (93.000), Albania (81.000) and Ukraine (80.000).

In absolute terms, the European country with highest share of immigrant is Germany first of all, followed by Spain, United Kingdom and Italy.

Now, starting to describe the **stock of immigrants in the EU** in the demographic, economic and social perspective, it is necessary first of all to point out that we will refer to foreign population²⁵. The demographic aspect covers themes as the amount of foreign residents, origin and destination country, composition by age and gender, acquisition of citizenship and composition of foreign households.

Nowadays there are about 36 million of foreign people living in the European Union. In 2008 there were instead about 32 million of people living in EU, of which 12 million persons originating in another European member state and 20 million persons originating in a non-member countries.

In absolute terms (Table 1.4), the **main European country with the largest number of foreign residents** is Germany (with 7 million), followed by Spain (5 million), UK (4 million), France (3.7 million) and Italy (3.4 million).

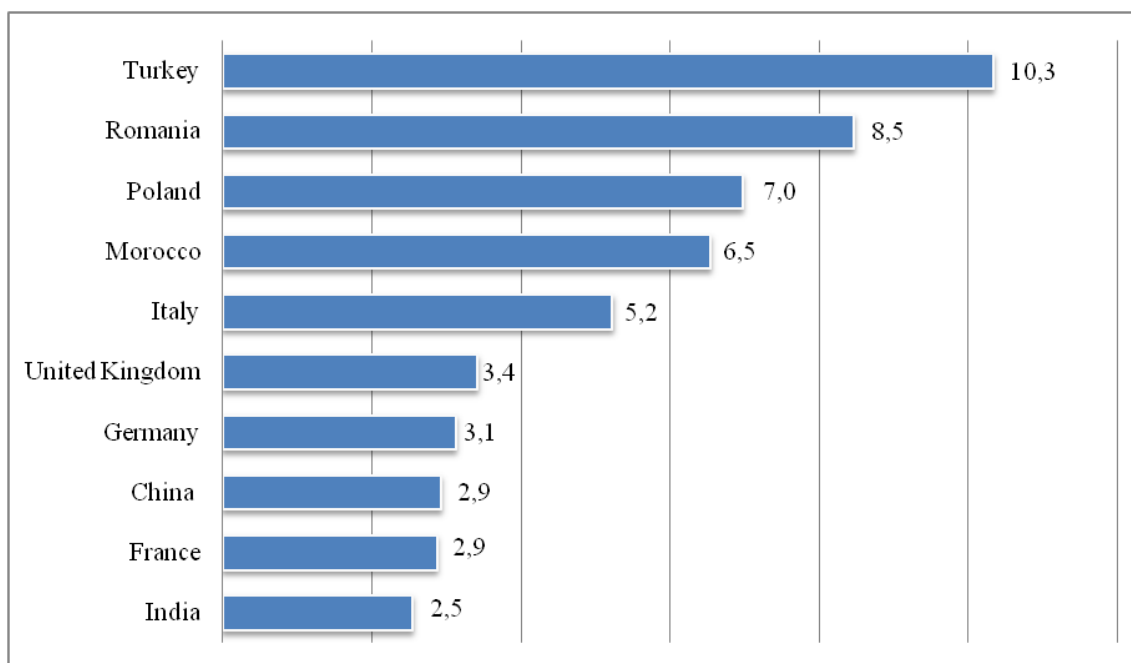
Analyzing also the **source country of these foreigners** provided by Eurostat, it is possible to notice the vastness of provenance. But, considering only the 10 main origin country, as shown in the figure 1.5, the largest number of foreign population come from Turkey (2 million) first of all, followed those originating in Romania (1.7 million), Poland (1.4 million), Morocco

²⁴ In 2008 there were 27 countries, Croatia began to be part of it only in 2013.

²⁵ In this section foreigners are those persons who not hold the same citizenship of the country in which they reside. Sometimes people are called here as **non-nationals** (or foreigners) which are those persons with foreign citizenship or as **third-country nationals** which are those persons with non-EU citizenship.

(1.3 million), Italy (1 million), UK (0.7 million), Germany (0.6 million), China, France and India²⁶.

Figure 1.5. Top ten foreign citizens in the EU-27, 2008 (% of foreign population on total native population)



Source: our elaborations on Eurostat database

Nevertheless, over the time the characteristics of foreign population could change due to several reasons, such as for the change of the number of births/deaths, the inflows/outflows, as well as for the acquisition of citizenship. In the European union, the acquisition of citizenships by foreigners can take place on several ways regulated by law, such as marriage and adoption or through naturalization process.

In 2008, about 697 million of persons have acquired citizenship of an EU-27 country, of which about 90% from people with non-EU citizenship, due to numerous incentive that people could have. The larger number of acquisitions appears in France (137.000), followed by United Kingdom (137.300) and Germany (94.500).

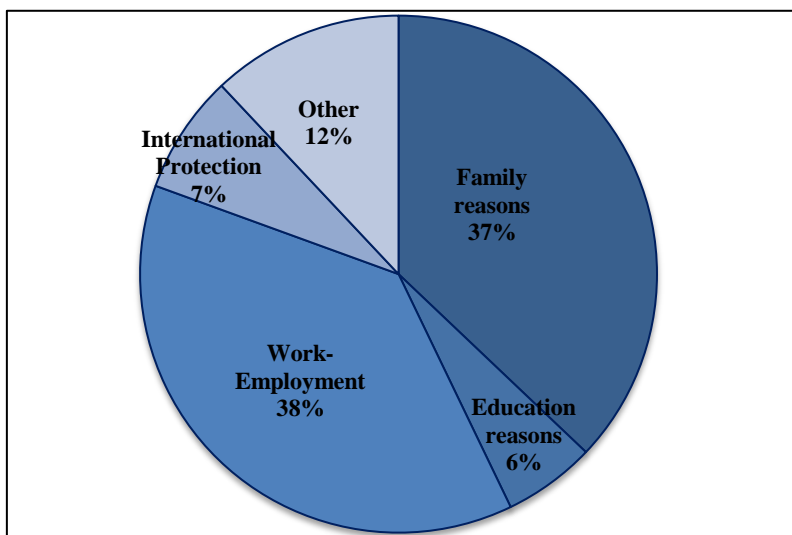
An important aspect to understand concerns the **reasons** that push a foreigner to migrate in an EU Member State, since these reasons may affect the destination country on different ways. Hence, according to LFS 2008 data²⁷, it is possible to identify these reasons.

²⁶ In particular Turkish settled mainly in Germany and Austria; Romanians in Spain and Italy; Polish in UK and Germany; Moroccans in Spain and Italy; Italians in Germany and Belgium; British in Spain and Ireland; Germans in Spain and Austria; Chinese in Italy and Spain; French in UK and Belgium; Indians mainly in UK.

²⁷ It refers only on 25-64 years old people .

As Figure 1.6 shows, almost 38% of people migrate for employment-related reasons and 37% for family reasons which signify that the majority of persons migrate to find better opportunities of work, but also for family reunification, namely when a family member migrated in the past and then only after some years the other family components reach their loved.

Figure 1.6. Main reasons for migration of foreign born population, 2008



Source: our elaborations on Eurostat

Considering now the age composition at European level, migrants are on average younger than nationals. In fact while the median age of foreigners is 34.3 (focusing primarily on the 25-35 range), that of nationals is about 42 years old. In particular, among foreigners there is a clear distinction between those that come from another Member State and those that come from third-country. More specifically, while the former have a median age of about 36.9, the latter have a median age of about 33 years.

Now, concerning the gender composition instead, there is an opposite situation between native and foreign residents. In fact, while foreign residents are composed for 51% by men and 49% by women, nationals are instead for 51% women and for 49% men.

The last demographic aspect to consider in this paper regards the composition of foreign households than that of nationals, measured in terms of share of foreign citizens living in a private household with or without dependent children (under 15 years). The LFS 2008 shows that 37% of foreign citizens live in household with two adults and a child at least, while 13% of them live in couples without children, unlike nationals who have lower rates, 32% and 15% respectively.

The second relevant feature in this elaboration concerns the **economic aspect** of migrants, focusing mainly on the labour market issues, as the activity rate, unemployment and employment rate and the sectors of employment, comparing them with nationals, but also distinguishing them between citizens from another UE-27 country and third-country nationals.

The first economic index used is the activity rate, defined as the ratio between the economically active population (employed and unemployed persons) and the total population (active and inactive persons).

Table 1.7. Labour market index, 2008 (%)

	NATIONALS	FOREIGN CITIZENS	EU-27 citizens	Third-country nationals
Activity rate	85	80	84	77
Unemployment rate	6	11	8	13
Employment rate	80	71	78	67
Overqualification	19	39	31	46

Source: our elaborations on Eurostat (2011)

As shown in the table 1.7, in 2008 the **activity rate** of foreigners is about 80%, five points less than that of nationals. This gap is probably due to the lower activity rate of third country nationals (77%) because inside this category there is an higher presence of inactive women in the labor market, probably due to the higher number of dependent children compared to that of foreign EU-27 and national women.

The second index describes the **unemployment rate**, measured as ratio between the unemployed population and the economically active population. As the Table 1.7 shows, foreign unemployment rate is equal to 11% compared with the 6% of nationals. This large difference depends mainly on the third-country nationals (13%) because they are characterized by a lower educational attainment than other citizens or because they have more problems with language, or problems related to discrimination or because their skills and qualifications earned abroad are scarcely recognized.

The third index analyzed is the **employment rate**, measured as the ratio between the employed population and the total population. In 2008, foreign employment rate was 9 points lower than that of nationals. This is due to some third-country characteristics because the employment rate of EU-27 citizens was similar to that of nationals.

These negative characteristics could come from a combination of lower participation rate of third-country women and a high probability to have difficulties in integration into the labour market. The length of stay in a receiving country results to have a positive effect on the foreigners employment rate. In fact, according to LFS 2008, migrants which reside for more than 8 years in the receiving country, seems to have a better employment rate and a better sector of employment than those of the first years after their arrive.

In this regard, the main **employment sectors** differ widely among both citizenships and genders (Table 1.8).

Table 1.8. Top main employment sectors by gender and citizenship in the EU-27 (%)

	NATIONALS	FOREIGN CITIZENS	Third-country nationals
Men			
Construction	13	23	23
Manufacturing	22	21	21
Wholesale and Retail trade	13	11	12
Accommodation and food service activities	3	9	10
Transportation and storage	8	7	7
Administrative and support service activities	3	5	6
Information and communication	4	3	3
Professional, scientific and technical activities	5	3	3
Human, health and social work activities	4	3	3
Agriculture	5	3	3
Women			
Activities of households as employers	1	15	18
Human, health and social work activities	17	13	13
Accommodation and food service activities	4	13	13
Wholesale and Retail trade	15	12	13
Manufacturing	12	10	9
Administrative and support service activities	4	9	10
Education	12	5	4
Other service and activities	3	4	4
Professional, scientific and technical activities	5	4	3
Financial and insurance activities	4	2	2

Source: Eurostat (2011)

The main employment sectors, being equal of citizenship and gender, appears to be manufacturing, wholesale and retail trades. Men are over-represented in the construction, transportation and storage sectors, whereas women are overrepresented in human, health, social work activities and education sectors. Distinguishing sectors among citizenship instead, foreign citizens are underrepresented in the Public Administration, defense and education, probably due to some restrictions for foreigners on the access to jobs in the public sector, and are overrepresented in construction (male gender), in activities of household as employers (female gender) and in the accommodation ad food service sectors or in the administrative and support service activities (both genders).

However, when we talk about employment, a relevant important topic concerns the overqualification phenomenon.

This term represents the state of being employed in jobs which requires lower qualifications or skills than those that an individual owns. To analyze this phenomenon there is the overqualification rate which consider the share of tertiary education (ISCED 5 or 6) which works in a low-medium skilled job (ISCO occupation level 4 to 9) among employed persons having achieved a tertiary education.

The overqualification rate of foreign citizens, shown in Table 1.7, is about 39%, compared to 18% of nationals. This gap goes to highlight the potential misuse of migrants' qualification and skills. This index is greater for third-country nationals (46%) due to the same reasons outlined just above.

Even in this case, as for the employment sectors, according to LFS 2008, the length of stay in the receiving country impact on this phenomenon. In fact, foreign citizens which reside for over 8 years in the receiving country, have more probability to see recognized their qualification earned abroad, but this occur mainly to foreign EU citizens instead of third-country nationals.

Finally, the last major issue to consider when we talk about migration concerns the social aspect. This aspect covers issues regarding income distribution, overcrowding phenomenon, poverty, social exclusion but also the education level of migrants.

The **income distribution** is the first important aspect to consider and in this elaboration is identifies as disposable income, namely the gross income less taxes and contributions paid by an individual plus social and any other private transfers received. In 2008, foreign citizens' disposable income²⁸ turns out to be much lower than that of nationals in almost all European countries (Table 1.9).

In absolute values, foreign citizens with the lowest income level (less than 10.000 €) reside in Hungary, Slovakia, Lithuania, Estonia, Greece and Czech Republic whereas those with highest income level reside in Luxemburg, Germany, Norway and United Kingdom.

At citizenship level instead, third-country nationals have a lower income than that of EU-27 citizens.

²⁸ Expressed at purchasing power parity

Table 1.9. Average annual disposable income per household, per citizenship and at purchasing power parity, 2008 (€)

	NATIONALS			FOREIGN CITIZENS			EU-27 citizens			Third-country nationals		
	Total	without dependent children	with dependent children	Total	without dependent children	with dependent children	Total	without dependent children	with dependent children	Total	without dependent children	with dependent children
Belgium	19.582	22.520	19.153	13.898	17.662	13.351	16.707	19.599	16.193	11.340	14.675	11.340
Bulgaria	5.577	6.356	5.159									
Czech Rep.	10.608	12.573	9.955	9.864	10.742	8.716	10.176	11.354	9.340	8.375		8.375
Denmark	19.444	23.264	19.708	15.274	21.696	14.990	18.414		18.275	14.559	19.775	14.796
Germany	19.839	23.652	19.258	16.713	20.917	16.294	19.686	23.193	19.281	15.066	19.090	14.635
Estonia	8.741	10.180	8.496	7.998	9.094	7.813				7.978	9.094	7.783
Ireland	20.772	25.690	20.180	18.931	23.381	17.523	18.481	24.878	16.607	19.080		19.902
Greece	13.725	14.427	13.035	9.768	11.792	8.658	10.751	12.626	10.182	9.501	11.646	8.368
Spain	15.704	18.043	14.059	12.937	15.351	11.374	14.485	17.234	13.746	12.252	14.326	10.651
France	18.574	20.861	18.124	15.409	18.678	14.478	19.081	22.202	17.919	13.893	16.410	12.987
Italy	16.871	19.364	15.145	12.682	14.846	11.883	14.043	15.892	13.863	11.977	14.481	11.285
Cyprus	21.133	23.203	20.399	17.437	16.705	18.355	21.289	20.894	22.179	14.771	14.091	15.637
Latvia	8.308	9.458	8.252	8.325	9.832	7.909				8.623	9.832	7.922
Lithuania	7.852	8.876	7.664	8.110	10.550	7.366				8.056	10.376	6.946
Luxemburg	30.405	34.225	28.219	24.256	29.815	22.442	24.962	29.815	22.691	21.140	28.067	19.483
Hungary	6.842	7.895	6.366	6.562		6.184	6.376		6.352			
Malta	13.898	17.116	12.590	14.550		11.946	13.983		11.922	14.765		12.920
Netherlands	20.788	25.444	19.685	18.088	23.848	17.703	18.239		18.863	17.931	23.608	17.480
Austria	20.880	23.974	19.608	14.975	17.430	14.638	17.867		17.153	14.246	15.084	14.166
Poland	7.105	8.133	6.595					18.966				
Portugal	10.354	11.685	9.591	10.308	13.214	8.976	10.335			10.308	15.951	8.821
Romania	3.430	4.233	3.152									
Slovenia	14.687	15.993	14.400	12.932	14.613	12.770	13.981		14.319	12.923	14.613	12.604
Slovakia	7.356	8.632	6.887	7.645			7.661					
Finland	18.542	22.591	18.109	14.596	18.621	12.544	17.663		17.311	12.225	17.265	10.791
Sweden	19.483	23.709	19.081	15.232	19.800	15.144	18.494	23.013	17.681	14.349	17.388	14.436
UK	21.275	25.647	19.530	20.170	26.172	18.296	23.365	24.714	19.371	18.496	26.267	16.663

Source: Eurostat (2011)

Another important element is **the risk of poverty and social exclusion of persons**, measured on three dimensions: risk of poverty after social transfers received, deprivation of some fundamental materials and living in very low-work intensity household. According to Eurostat (2011) and EU-SILC 2008, the 32% of foreign citizens are at risk poverty, compared to the 20% of nationals. This risk is greater when considering third-country nationals, whereas the risk of EU-27 citizens is almost similar to that of nationals.

Overcrowding phenomenon is a big issue when considering the foreign households. In fact in 2008, there are about 27% of foreign citizens living in small spaces in their home, compared to 18% of nationals. The situation is even worse for third-country nationals since the 31% of them live in a overcrowded house.

At **educational level**, according to LFS 2008, foreign citizens²⁹ have lower level of education than nationals, in fact the 23% of them are highly educated whereas the 38% of them have a lower educational attainment. However migrants according to their educational attainment

²⁹ In working age group 25-54.

tends to differ among the European Member States. In fact countries as Ireland, Sweden and Norway are characterized by tertiary educated migrants, whereas country as Portugal, Greece, Italy, Spain and Germany are characterized by migrants with low educational attainment.

1.4 Salient features of the foreign population in Italy

The main issues to consider in the description of foreign³⁰ population that reside in Italy regards the demographic, economic and social aspects, as done in the above description at European level. In this case is considered 2013³¹ as base year, through the use of Istat, MeF, Banca d'Italia, Eurostat data and Fondazione Leone Moressa's elaborations.

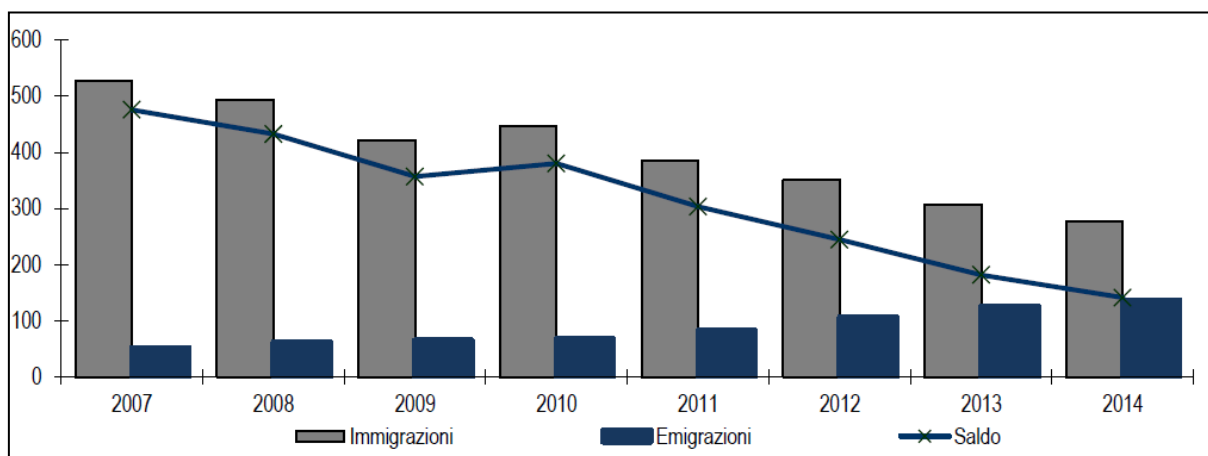
In the last twenty years, **migration flows** represent the prevailing demographic factor of growth in Italy, producing a positive net migration and helping to change the resident population in quantitative and structural standpoint. However, this trend has been gradually reduced over time: in 2014 the growth of the population has stopped just 13.000 units since the positive net migration with foreign countries (+141 thousand) was able to offset even a largely negative natural balance (-96 thousand). The role foreign inflows, opposed to the more problematic evolutionary path of de-natural growth, was the main key to understanding the recent demographic trends on a national scale. In the perspective key, that role seems to be partly compromised: according to the first provisional data of 2015 related to the period from January to June, there was a net migration of just 66.000 units compared to the natural balance that has already exceeded 103.000 of deficit units.

Comparing actual situation with that of the recent past it is possible to observe that the current ones is not represented only by the negative effects of de-birth rate, but also by the loss of attractiveness of the country in respect of international migrants. Immigrations over the last five years have fallen by 38%, from 448.000 units in 2010 to 278.000 in 2014. The emigration rather are more than doubled, shifting from 67.000 to 136.000 units. The net migration is equal to 141 thousand units, registering the lowest level in the last eight years. However remains fundamental the contribution of the foreign component on the Italian population, ensuring a positive net migration of over 200.000 residents, although down compared to previous years. The foreign population, however, offers a more than positive contribution to the difference between births and deaths (+69 thousand).

³⁰ As people with non Italian citizenship having their usual residence in Italy.

³¹ Using data referred to 2011 or 2012 for some exceptions.

Figure 1.10. Migration inflows and net migration in Italy, 2006-2014



Source: Istat

The **demographic aspect** covers themes as the amount of foreign residents, acquisition of citizenship, origin and destination country, composition by age and gender, and composition of foreign households.

According to Istat data on the national demographic balance, at the date of 1 January 2016, were legally resident in Italy 5.026.153 foreign citizens, equal to 8.3% of the total resident population (60.665.551). In 2013, the foreign population residing in Italy reached about 4.4 million, of which 1.2 million by EU citizens and 3.1 million by non-EU citizens³², with a growth accounting for 69.2% since 2007. This remarkable growth is not due to the increase of migration flows, which have had a sharp decline for the 2008 economic crisis and that to date, despite the recovery, did not reach the level of 2007, but instead to the numerous foreign births and acquisitions of citizenship. In fact in 2013 citizenship acquisitions achieved the value of 65.383, of which about 93% by former non-EU citizens and 7% by EU citizens³³. This indicator includes acquisition of citizenship by marriage³⁴, which alone represents a fairly frequent mode of citizenship's acquisition or through other ways such as naturalization and "ius sanguinis" acquisition.

A peculiar appearance of the foreign presence in Italy is the strong heterogeneity of community of origin. The main **country of origin** is Romania with 933.352 foreigners (21% of total foreign residents) probably due to the recent membership to the European Union, followed by Albania with 464.962 individuals (11%), probably motivated by the exemption from entry visa for a maximum stay of 90 days, and from Morocco with 426.791 people.

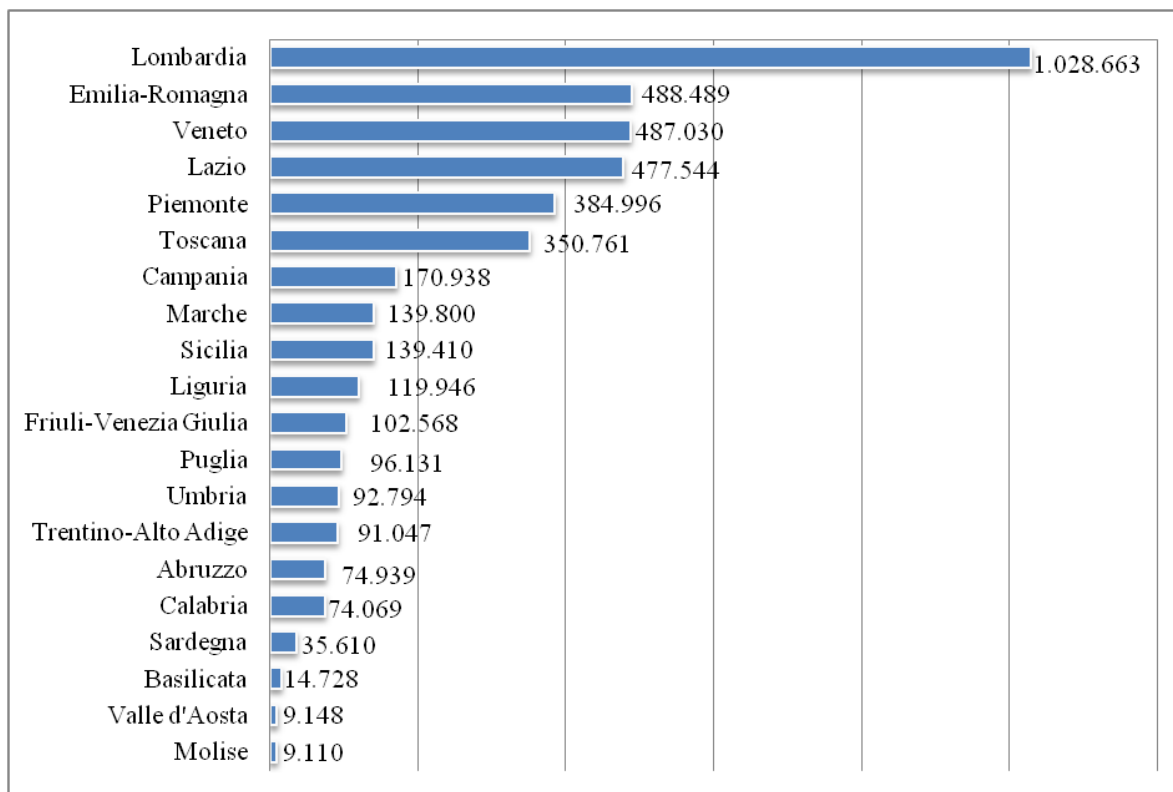
³² In this case the European countries are 28.

³³ Mainly Morocco (14.278), Albania (9.493) and Romania (3.272).

³⁴ In fact since foreign women are outnumbered than men, mixed marriages with an Italian citizen turn out to be a fairly frequent mode of acquisition of citizenship.

Following the other major communities of origin appear to be, even if to a lesser extent, china (223.367), Ukraine (191.725), Philippines (139.835), Moldavia (139.734), India (128.903), Peru (99.173) and lastly Bangladesh (92.695).

Figure 1.11. Foreign resident population by region of destination, 2013



Source: our elaborations on Istat data

In 2013, in absolute terms, the **region of destination** preferred is Lombardia with about 1 million of foreign people, followed by Emilia Romagna, Veneto and Lazio (Figure 1.11) .

Foreign population appears to be rather younger than natives, with a greater concentration of them in the 25-34 years range.

The **gender composition** at national level appears to be fairly balanced with women that account for 53% of foreign population and men for 47%. However, the gender composition varies according to citizenship: in fact whereas the female gender is composed mostly of women from Romania, the male gender is mainly composed of individuals from third countries³⁵.

Finally the last major demographic aspect concerns the **family composition** of foreign population. FLM elaborations on the Banca d'Italia data relating to 2012 states that the

³⁵ While Asian migrants results to be more balanced.

foreign population is composed for 37.8% by a single component, for 11% by 2 components, for 16.2% of cases by 3 components and for 35% of cases by 4 or more components³⁶.

The second relevant feature in the description of foreign resident population, namely the **economic aspect**, focuses mainly on the labour market issues as the activity rate, unemployment rate, employment rate and the relative sectors of employment, comparing foreigner with national citizens.

As shown in the Table 1.12, the **activity rate** of foreign population turns out to be higher than that of native population. This difference is probably explained to the different demographic structure between the two populations. In fact, while the most foreign population with more than 15 years is active in the labour market (69%), among natives this percentage is well below that value (47%). This is directly related to the inactivity rate, which among natives turns out to be higher than that of foreigners (53% and 31% respectively).

Table 1.12. Labour market index by citizenship, 2013, (%)

	NATIONALS			FOREIGNERS		
	Male	Female	Total	Male	Female	Total
Activity rate	72,4	52,8	62,6	81,6	60,9	70,5
Unemployment rate	11,0	12,4	11,6	16,6	18,0	17,2
Employment rate	64,3	46,1	55,2	68,1	49,8	58,3

Source: our elaborations on Istat data

Even in the case of the **unemployment rate**, the one that refers to foreigners appears to be greater than that of natives. This difference is probably justified by the greater vulnerability to economic cycles³⁷ of the sectors where immigrants are mainly employed.

Different appears instead the situation concerning the **employment rate**, because looking at table 1.12, the rate related to foreigners proves to be greater than that of native. This is an abnormal case if compared it with other European countries where the employment rate for natives is higher than that of migrants³⁸.

In this case, however, since this rate varies greatly among gender and citizenships, it is necessary to look over that distinction. In fact, although the employment rate of women is lower than that of men, being equal to gender, the rate of foreign women is higher than that of natives. This is probably justified by the higher employment of foreign women in sectors that

³⁶ Unlike Italian family composed for 27.% of cases by a single component, 29.2% by 2 components, 19.6% by 3 components and 23.6% by 4 or more components.

³⁷ As the recent economic crisis.

³⁸ As in France, Germany, Netherlands and Belgium.

have less suffered the recent crisis or due to greater incentives in the labour market participation as a result of the householder men job loss.

In the matter of **employment sectors**, there is a clear distinction among natives and migrants. Whereas natives are distributed more evenly among sectors with an higher presence in public areas³⁹, foreigners are employed mainly in three categories. In fact, as Table 1.13 shows, 28,9% of foreigners is employed in personal services, 18,4% in industry and 13,3% in construction.

Table 1.13. Main employment sectors by citizenship, 2013 (%)

	NATIONALS	FOREIGNERS
Agriculture, forestry and fishing	3.5	4.7
Industry	20.4	18.4
Construction	6.4	13.3
Commerce	15.6	8.5
Accommodation and food service activities	5.1	9.3
Transportation and communication	7.4	5.1
Real estate and financial activities, business services	14.4	7.0
Education, health, social services, public administration	22.1	4.8
Other collective or personal services	5.2	28.9
Total	100.0	100.0

Source: FLM elaborations on Istat data

In particular, based on origin country and gender composition of foreign citizens there are some difference in the employment sectors. Migrants that comes from Albania are mainly employed in the construction sectors, whereas Moldovans and Ukrainians in the personal services and housekeeping, whereas Filipinos in personal assistance sector. Considering data by gender instead, the most common job profile among men is that specialized in the construction sector, whereas among women prevails employment in domestic services.

However, the concentration of worker in a limited number of sectors limits also the quality of the occupations, professional roles and job classification of foreigners since most of them focuses on unskilled occupations. Considering the labour market situation is necessary to keep in mind that 2013 turns out to be in the post-economic crisis period and this fact explains why there is a sharp employment reduction in many sectors, both for natives and migrants, and a further overqualification of foreign citizens.

³⁹ Mainly in education, health services and public administration sectors.

Finally, the last important aspect in the description of foreign resident population, namely the social aspect, covers themes as poverty, housing condition and household income.

According to data from FLM (2014) and Banca d'Italia related to 2012, there is a clear evidence about the fragility of foreign household in terms of **poverty index**⁴⁰: whereas the percentage of Italian low income household reaches 12.4%, that referred to foreign households rises to 33.9%.

Another important indicator regards the **housing conditions** which instead marks a further inequality among native and foreign households. In fact whereas 71.2% of Italian households live in a home ownership and the 17.8% in tenancy, foreign households live for the majority of cases in tenancy (74.8%) and only 13.6% are the owner. Furthermore foreign households are concentrated in the suburban areas, living in small dwellings and showing frequent overcrowding situations⁴¹ (36.7% of foreign households cases versus 9.9% of native households). An issue to be reckoned on housing conditions regard the fact that rental properties where foreign households reside are for 89.1% of cases owned by a private institution and only 10.9% by a public institution. This wants to underline that if compared to Italian housing conditions where 35.2% of households in tenancy reside in a public ownership, foreigners have less access to public residential housing, as well as to other forms of housing welfare.

Considering **income distribution**, according to Banca d'Italia data, there is a clear evidence of the wide inequality among the two types of household, because foreign households dispose on average half of native household income (about 16.629 versus 31.400 respectively, in 2012).

⁴⁰ According to Banca d'Italia definitions', with poor individuals term means the share of persons which lives below the poverty threshold, that for 2012 amounts to 7.678 €, defined as the half of the equivalent median income.

⁴¹ According to Banca d'Italia definitions' overcrowding occurs when the dwelling residence size is below 30 square meters per cohabitant component.

CHAPTER 2. FISCAL IMPACT OF MIGRATION ON DESTINATION'S COUNTRY SUSTAINABILITY

2.1 Impact of migration in the European Union: an overview

As shown in the first chapter, Europe today represents one of the main continents of destination of migration flows. Furthermore, the combination of the recent financial crisis, which deteriorated the public balance of many countries, together with the ageing of native population, which reinforces the budgetary imbalance, and the growing share of immigrants on the total native population, create tensions among natives.

In fact is widespread among inhabitants the impression that immigrants represent an expense to the State Budget of a country, because they benefit more in public transfers and contribute less in taxes, further exacerbating the general government balance.

This raises the question on whether and to what extent immigrants contribute in fiscal terms to the State Budget of the country on which they decide to settle. For this reason in this section we found the debate on what is the fiscal impact of immigrants on State Budget of destination country, making a comparative analysis at European level.

To make possible this type of analysis we will analyze the fiscal impact of immigrants in terms of **net contributions in a given year**, resulting from the difference between the contributions paid and benefits received by them, estimated in some cases at average level per household and in other at overall national level .

Until now, there are still few empirical studies which analyze the fiscal impact of immigrants at comparative level, due to the difficulties of tracing perfectly coincident data across countries⁴². For this reason, the majority of available empirical studies analyze net contributions of immigrants considering only part of the public budget revenues and expenditures relating to the immigrant population.

Among these there are those carried out by Boeri (2009), OECD (2013) and Huber & Oberdaberning (2013).

⁴² Problems on different data available as transfers and taxes components, reference period, concept of immigrant population (if foreign born or foreign citizenship), nature of the social protection system, legislation on migration and access conditions to public benefits

The first paper, based on EU-Silc 2004-2007 data⁴³, estimates the average net contribution of immigrant households for eleven European countries⁴⁴. In terms of contributions Boeri (2009) considers income taxes and social security contributions (paid by both employer and employee) whereas in terms of benefits items considers unemployment, old age, survivors', sickness and disability benefits as contributory benefits and housing allowances, family-related transfers and social exclusion benefits⁴⁵ as social transfers.

The analysis shows that, across countries, there is a large heterogeneity on the average net contribution of migrants, with positive results in Austria, Belgium, Germany, Spain, Sweden and UK, ranging from €800 € (Sweden) to €12.500 (UK) per household and negative net contributions in Denmark, Finland, France, Ireland and Luxembourg with an average ranging from €-1.000 (Denmark) to € -3.000 (Finland) per household.

Looking at the two items that compose net contributions, there is a strong evidence that, on average, migrants contribute less to public budget rather than abuse it in terms of benefits.

In terms of social contributions and taxes, foreigners are more likely to contribute less than native population because, beyond the fact that among foreign resident those that contribute are about half⁴⁶ of them, in the European system where taxes are progressive and social security contributions are proportional to earnings, immigrant's contributions are very low. In terms of benefits instead, foreigners have less probability to receive contributory transfers than native population, whereas are overrepresented in the social transfer recipient. However, as explained before, social transfer to migrant population have a lesser amount than the contributory transfers to native population⁴⁷.

Furthermore, Boeri points out that, since contributory benefits typically not require the mobilizing of the General Government revenues, migrant population may affect the generic taxpayer increasing the tax burden in different ways, as for example in a situation where migrant population has an higher unemployment rate than the average, making them less contributors and more beneficiaries⁴⁸, or when migrants receive many social transfers that lead them to have less incentives to seek a job. In these cases migrants became more "welfare dependent" than natives, draining resource also from contributory schemes.

⁴³EU-SILC is a standardized annual survey that provides detailed information on tax and benefits position of interviewers and their family components. To make an analysis for different years, the author made an average estimates per year.

⁴⁴ Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxemburg, Spain, Sweden, UK.

⁴⁵ Excluding health and education transfers due to the difficulty to recover that data.

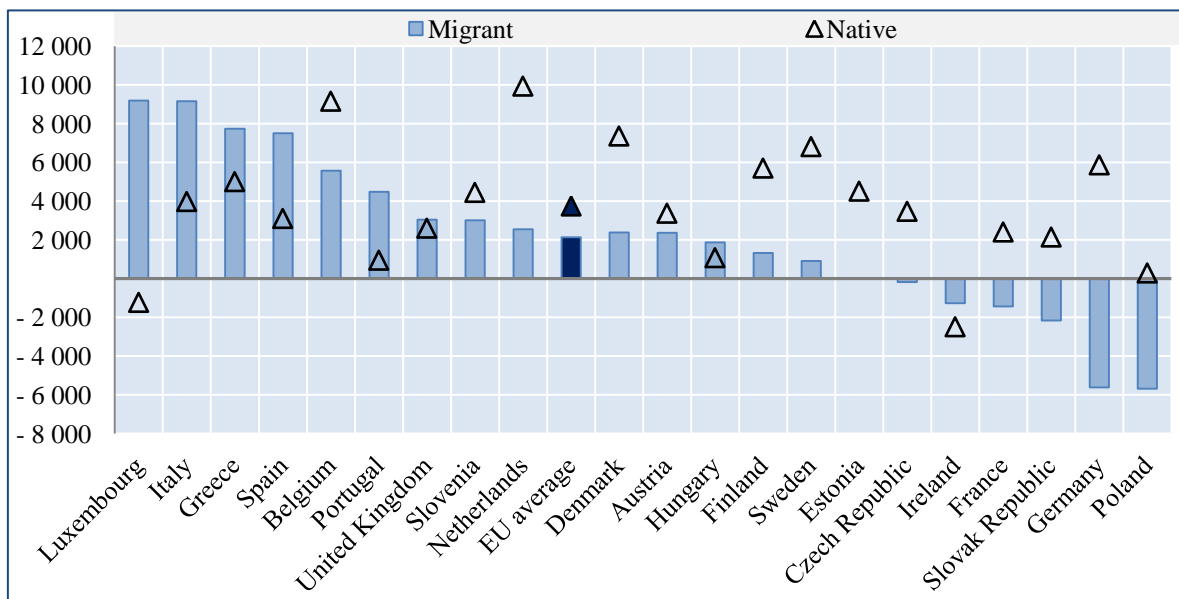
⁴⁶ With some exceptions as in Spain, Belgium and Austria.

⁴⁷ Nevertheless, we have to notice that in this study expenses on public health and education referred to migrants are not considered, even if the public education spending on immigrant population seems to be in pretty strong measure.

⁴⁸ In terms of unemployment benefits, pension minima against the labour market risk.

OECD (2013) estimates the average net contributions for 21 European countries on the basis of Eu-Silc 2007-2009 data⁴⁹. In terms of contributions, it considers the so-called “direct monetary transfers” that regards the income taxes and social security contributions⁵⁰, whereas in terms of benefits it considers pension benefits (old age and survivors), unemployment benefits, housing allowances, family allowances and social assistance benefits. As shown in the Figure 2.1, the average net contribution of migrant household in the EU is positive, with an amount equal to €2.130 per household.

Figure 2.1. Average net direct contribution per household, by household type(€), 2007-2009 average



Source: OECD (2013) on Eu-Silc database

Average net contributions of migrant households are positive in fifteen countries out of 21, with amounts ranging from €896 (Sweden) to €9.178 (Luxembourg) per household; net contributions are negative in the remaining five countries with amounts ranging from €184 (Czech Republic) to €5.691 (Poland) per household. Compared with native households, net contribution of foreigners are on average lower by €1600 per household, with some exceptions in those countries with recent labour migration flows (Italy, Spain, Greece and Portugal) on which seems that migrant households contribute more than natives households

⁴⁹ Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom. Estimates per average household are further averaged among the three years analyzed.

⁵⁰ Social security contributions of both employer and employee.

and in those countries characterized by previous “guestworker flows”⁵¹ on which seems that migrants contribute less than natives.

The difference in net contribution between migrant and native households might depend on different incidence on the single items of contributions and benefits. Hence looking separately contributions and benefits that these types of households provide to the public purse and the transfers that they receive, the difference in the average net fiscal contribution of immigrant versus native born households are driven by lower contribution rather than higher benefits receipt.

In fact, the average EU difference in contributions is equal to about €-3.500 whereas in benefits to about €-1.900 per household. Indeed, the difference in benefits is on average negative, because, including the pension system in this analysis, migrants receive on average lower pension payments than native households⁵². However there are some exceptions where the difference in benefits of migrant versus native households is positive. This occurs in those countries characterized by large aging immigrant population as in Germany, Poland and France. The contrary occurs in country with recent labour migration flows, as in Italy, Spain and Greece.

The last research taken into consideration was developed by Huber & Oberdaberning (2013), that basing on Eu-silc 2009 data, estimates the average net contribution of migrants in 19 European countries⁵³, considering the same contribution and benefits items used by Boeri (2009).

From the estimates appears even in this case an heterogeneity in terms of average net contributions. In fact, even if the average net contributions of migrant households have a negative impact on the state budget overall, in 10 out 19 countries results are positive and range from €582 (UK) to €3.438 (Luxembourg) per household, whereas in the remaining 9 countries outcomes are negative with values ranging from €1.360 (Latvia) to €8.119 (Germany). Native households instead, contribute positively only in 6 countries. Typically, net contributions of migrants are negative in the same countries where native households contribute negatively to the state budget.

⁵¹ France and Germany: in these countries migrants were attracted by some government laws developed for the necessity to satisfy the wide demand for manpower not satisfied by native supply in those years, for then restrict the access to new migrants, causing an imbalance between contribution and benefits from/to immigrant population due to the increase of the number of migrants in retirement age and a reduction in working age, in countries with big problems about the aging of native population.

⁵² Excluding the pension system does not alter the results fundamentally.

⁵³ Austria, Belgium, Cyprus, Czech republic, Germany, Estonia, Spain, France, Greece, Ireland, Italy, Lithuania, Luxemburg, Latvia, Netherlands, Portugal, Sweden, Slovenia, United Kingdom.

However exist some exceptions, as in Germany, where the negative net contribution of migrants and those positive of native households is basically due to the fact that the amount of benefits that migrants received is higher than the amount of contributions that they paid. In this regard appears that in those countries where migrants receive more benefits overall, even their take-up rates are very high. This could explain reasons for which migrants decide to move to a country instead of another. However Huber & Oberdaberning (2013) appoints that, as the other two authors described above, the lower average net contributions of migrant versus native households is probably due to lower contributions paid instead of higher benefits received. This, in turn, depends on the lower wages earned by foreigners in addition to some “behavioral differences”, meant as the higher share of migrants who works in black marketeering or the higher discretion over tax payments when migrants are self-employed.

Nevertheless, although net contributions resulting from these research appear to be conflicting on the amount of net contribution for the same country, due to the different expenditure items examined (whereas revenue items are identical), however seem to agree on the impact (if positive or negative) that in general an immigrant household has in the country of resettlement.

Table 2.2. Average net contribution per immigrant household on State Budget of those countries present in all the inquiries (€)

	Boeri (2009)	OECD (2013)	Huber & Oberdaberning (2013)	Fiscal impact in terms of net contributions
Luxembourg	-1.887	9.178	3.438	+
Italy		9.148	2.664	+
Greece		7.728	1.694	+
Spain	8.047	7.496	414	+
Belgium	11.788	5.560	810	+
Portugal		4.479	1.294	+
United Kingdom	12.533	3.029	582	+
Slovenia		3.006	1.929	+
Netherlands		2.544	3.792	+
Austria	9.481	2.353	-1.910	+
Sweden	839	896	1.801	+
Ireland	-1.937	-1.274	-5.451	-
France	-2.285	-1.451	-7.171	-
Germany	3.137	-5.633	-8.119	-
Source data:	EU-Silc 2004-2007	Eu-Silc 2007-2009	Eu-silc 2009	

Source: our elaborations on Boeri (2009), OECD (2013) and Huber & Oberdaberning (2013) estimations

In fact, the table 2.2. shows the net contributions resulting from the studies analyzed, referring only to the countries where it is possible to make a comparison between the results. In terms of fiscal impact (positive or negative) of immigrant households appears that in most countries characterized by recent migration as Italy, Spain and Greece immigrants make a positive contribution to the public budget, while the opposite occurs in those countries characterized by an ancient immigration, as Germany and France.

But, since these empirical studies analyze the net contributions of immigrants considering only part of the public budget revenues and expenditures relating to the immigrant population, this could not better represent the real impact of these immigrants⁵⁴. Then analyzing the fiscal impact of immigrants through a more detailed analysis (referring to the fact of adding more categories of expenditures and revenues) it will be possible to have a clearer idea on the situation at European level, although as we shall see, the effects resulting from these research coincide with those of the analysis that will be described later, for most of the countries.

OECD (2013) has developed another and more detailed analysis, including on the revenues side other than income taxes and social security contribution also indirect taxes as VAT, and property tax, accounting for 74% of the total government revenues. On the expenditures side other than social protection transfers⁵⁵ it includes also education, health expenses, as well as the active labour market policy costs, representing almost 63% of total government expenses overall⁵⁶. In this case OECD estimates the overall fiscal impact of migration on national GDP over the 2007-2009 average, as shown in Figure 2.3.

From this type of analysis appears that the overall fiscal impact of migration seems to be positive and on average of about 0.35% in terms of GDP in the baseline scenario. The result is positive in 15 out 21 countries. In particular, the fiscal impact of immigrants is largest in Luxembourg (2% on GDP), characterized by a migrant population that mainly comes from developed countries, with an high employment and specialization rate. Then there are countries as Italy and Greece (0.98% on GDP), characterized by recent migration flows and in working age that could generate a positive contribution. In contrast, the impact of migration is

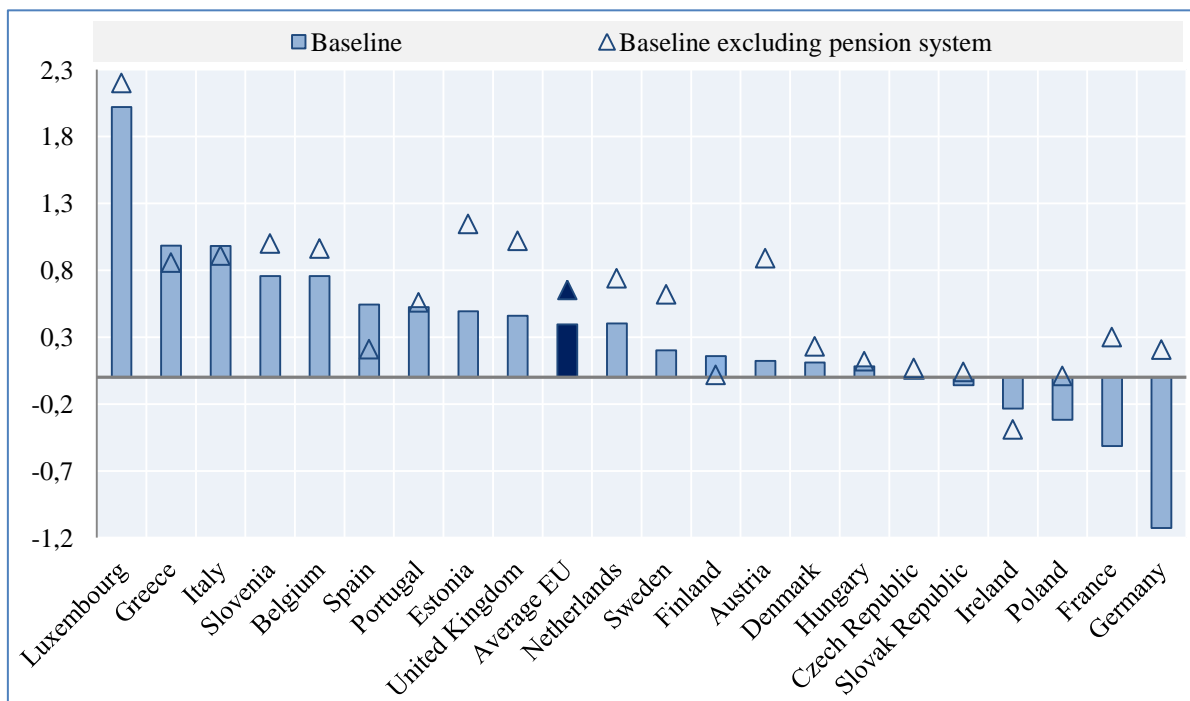
⁵⁴Probably because omitting expenditures on health and education for example, can change results substantially.

⁵⁵Detailed description of items are mentioned above, in OECD (2013).

⁵⁶From the analysis are excluded instead the items as corporate income tax and taxes on specific goods and services on the revenues side, and on the expenses side costs for the public administration, infrastructure and defense.

negative in countries as Germany (-1.1% on GDP) due to a large share of migrants that receive pension benefits⁵⁷.

Figure 2.3. Overall net fiscal impact of immigrants estimated in terms of GDP (%), with and without the pension system, 2007-2009 average



Source: OECD (2013) on Eu-Silc database, General Government Accounts and OECD Revenue Statistics

Germany is then followed by France (-0.52% on GDP) and Poland (-0.32%) where the advanced average age explains the negative impact of foreigners. Excluding from the calculus pension benefits, the net contributions of migrants improve on average about the 0.65% on GDP and, at country level in Germany, France and Austria. The contrary occurs in Spain, where only few migrants receive pension benefits. Nevertheless, taking into consideration only a part of revenues/expenses of General Government the estimates developed represents an approximation. OECD has in fact consider that, including all other items (except defense), the fiscal impact on average seems to be negative (-0.42% on GDP).

However, considering that migrants represents only the 10% of total population, and also that in those countries there were a budget deficit of 1.5% on average, appears pretty sure to sustain that the impact of migration is neutral in most of the European countries. Overall, the

⁵⁷ The longstanding permanent migration of the so-called “Guestworker”.

fiscal impact of migration in terms of GDP is insignificant, never exceeding, positively or negatively, the 0.5% of national GDP⁵⁸.

2.2 Immigrants and the Italian Public Budget: estimates in the short term

As shown in the previous section, the fiscal impact of migration in Italy turns out to be positive for all the research analyzed. It is therefore interesting to observe recent and more detailed reports on the impact of migration on the sustainability of the Italian welfare state. Even in this section will be reported estimations on the fiscal impact of foreigners through their net contribution, resulting from the difference between the contributions paid and benefits received by them. In particular, whereas the first report (Devillanova 2011) estimates the impact in terms of average net contributions per household, the other two reports examined (Banca d'Italia 2009 and Idos-Unar 2015) estimates the impact trying to evaluate the debit and credit relationships between migrants and Italian Public Budget.

Devillanova (2011) estimates the average net contributions of migrant⁵⁹ and native households using Eu-Silc 2007 database. For this evaluation it considers as contributions taxes on income (IRPEF and financial activities), social security contributions and Ici⁶⁰, and as benefits family and housing allowances, social exclusion benefits, unemployment, old-age and survivors benefits, invalidity, and monetary transfers for education and health. This report shown that the migrant's average net contributions change according to the country of origin. In fact, while net non-EU migrant contributions are on average equal to €346 per household, those relative to migrants from other EU countries are negative and on average equal to € -252 per household, in a country where average net contributions of native population are negative and equal to € -3.000 per household. Considering revenues and expenditures items that compose the Italian State Budget, it is possible to identify which items have the greatest impact, changing net contributions of the different population. Overall, migrant households contribute on average less in taxes than Italian households, as well as receive lower benefits than these latter.

In terms of contributions, if an Italian household pays fees equal to 13.367€ on average, an EU/non-EU migrant household contribute with a lower amount respectively of about 1.660€

⁵⁸ Clearly is only an hypothesis since in the sample are considered only resident population, excluding asylum seekers, that in the recent years are increasing rapidly, and irregular migrants.

⁵⁹ Identification of migrant and Italian households takes place through the attribution of the country of birth of the households' head. In this case Devillanova divides further migrants in Europeans and non Europeans.

⁶⁰ Local council property tax.

and 2.460€ on average. These differences among country of birth depends mainly by the fact that native households give greater contributions in the form of personal income taxes and ICI, rather than in social contributions. In particular, this distinction is more pronounced among Italian and non-EU immigrant households⁶¹, as a result of lower taxes due to lower earnings and, conversely, to an higher social contributions due to higher activity rate of these latter.

In terms of benefits, the fact that migrant households receive a lesser overall amount than natives is mainly due to the fact that they represents a lesser incurred cost in pension and health benefits related to the seniority⁶². In fact, net of these benefits, the overall benefits among these three categories would result quite similar. However migrant households receive on average, even if to a lesser disparity than natives, more benefits in terms of family allowances, unemployment benefits, education and housing allowances⁶³.

Although the report analyzed above examined the fiscal impact of migration at household average level, claiming that immigrant households in general have a positive impact on the public budget, is also interesting to investigate what is the fiscal impact of this type of population overall. Even in this case it is possible to estimate net contributions⁶⁴, but analyzing the overall net contributions of migrant population intended as the difference between revenues and expenditures of the Public Budget related to immigrant resident population.

One of more recent studies that estimates the overall fiscal impact of migration is the report of Banca d'Italia (2009) which uses data collected from Eu-Silc 2006 and Banca d'Italia surveys. In this regard, Banca d'Italia considers in the revenues side of the Italian Public Budget Irpef, VAT, excise duties, social contributions and Irap, whereas in the expenditures side expenses on education, health, pension benefits and expenditures on income support, taking into consideration overall the 70% of possible revenues and the 60% of possible expenses. The report shows that migrant contribute positively to the Public Budget of about 10.6 billion €⁶⁵. In addition, over a share of 5% of total presence in Italy, only 4% of migrants contribute to the State Budget and only 2,5% of them are social transfer recipient. Furthermore, the average tax return of migrants is lower than that of natives in accordance

⁶¹ rather than EU migrant and italian households.

⁶² Old-age pensions and health costs.

⁶³ This latter referred to costs related to house, rent or loan for the purchase of a house. This item is greater for non-EU migrant than EU migrant households.

⁶⁴ Expressing net contributions as the difference between contribution paid and benefits received.

⁶⁵ With revenues of about 20 billion and expenses of about 10 billion.

with the lower earnings gained. Expenses relative to foreigners are too lower than that of natives, because migrants, even if they have education cost similar to that of natives, generate fewer significant outlays in health and pension sectors.

However the analysis shows an excessively high overall net contribution. for this reason there is the need to check whether, from another analysis of this type emerges a similar result.

In this regard it is interesting to recall the report of Idos (2015), which estimates the fiscal impact of foreign citizens resident in Italy in 2013, using data from various sources⁶⁶, but mainly from MEF and Istat-Rcfl. To measure this impact, we first distinguish State Budget revenues into six categories listed below, for each of which Idos computes different assumptions.

1. **Irpef**, the first item analyzed, presents some difficulties on the estimation. According to MEF, in 2013 3.5 million of foreign-born submitted individual income tax return⁶⁷, with a stated income equal to € 45.6 billion overall and a tax return of about € 6.74 billion. In the same year the average stated income per capita is equal to 13.181€ and the main source of income comes from dependent employment. However Idos-Unar has further elaborated⁶⁸ these data in order to obtain information about foreign citizens, since these two categories refer to two types of population that are not perfectly coincident⁶⁹.

Based on Istat data, are then estimated the number of contributors of foreign citizenship comparing the number of foreign employees⁷⁰ with the average income declared by foreign born of the same origin country, and obtaining an amount of about 2.3 million of contributors of foreign citizenship, with the equivalent income taxes declared of about 26.1 billion €. However, of about 2.3 million on them, only 1.4 billion of foreign citizens are liable to pay Irpef, according to some Mef ratios, for an overall amount of about 3.2 billion €.

2. **Tax on consumption**. Assuming that the 90% of the overall income of foreigners is used⁷¹ and that the average tax rate is equal to 6.2%, is estimated an average tax of about 1.5 billion €.

⁶⁶ That will be described afterwards.

⁶⁷ Equal to the 8.6% of total taxpayers in Italy.

⁶⁸ because they are estimated on the basis of foreign-born category which results to be very different from the category of our interest, foreign citizens.

⁶⁹ excluding in this way those persons born in other countries which could have Italian citizenship from the database.

⁷⁰ 2.4 million in 2013.

⁷¹ 10% is intended to remittances to origin countries, rents, mortgages, and other items not subject to VAT.

3. **Oil mineral tax.** Based on Ministry of Infrastructure and Transport, in 2013 there are 3 million of foreigners that hold a car. Assuming a mineral oil tax average equal to 300€ per capita, is estimated an amount of 930 million € for the mineral oil tax.
4. **Lotto and lotteries.** Assessing an average of 5€ monthly for 3.8 million of adult foreigners, is achieved an overall amount equal to 230 million €.
5. Annual tax from **the renewal or issuance of residence permits.** Considering an average tax of 200€ per capita with an amount of about 1.5 million of residence permits renewed/issued in 2013, it is estimated an amount equal to 300 million € overall. However in this item there is the necessity to consider also revenues tax that come from naturalizations. Considering that in 2013 acquisitions of citizenship are equal to 100 thousand and assuming a per capita cost equal to 200€, there is an additional revenues of 20 million €, for a total amount of 320 million €.
6. The total tax revenues that comes from items described above amount to 6.1 billion €, on which must be added **social security contributions** because, even if represents a provision for the worker, in the short term will support the public purse⁷². Based on MEF, Istat and Inps data, assuming a tax burden equal to 4.294€ for both employer and employee with 2.4 million of foreigners employed, results an estimation equal to 10.5 billion € for social security contributions.

Therefore, adding up all items described above, immigrants make contributions of about 16.6 billion € to the Public Budget in 2013.

Then, we distinguish State Budget expenditures related to migrant population into six categories, through the standard cost approach⁷³ method of estimation.

1. **Public health.** In this sector, where the majority of this expense is targeted to the elderly population, the demographic composition of migrants reflects the lower use of health care services. With a postulated incidence of about 3.5%⁷⁴ of migrants on the total expenditures of 109 billion €, the cost attributed to foreigners results to be equal to 3.9 billion €.

⁷² We will discuss this matter in the third chapter.

⁷³ Standard cost approach estimates the average of each expenditures of providing goods/services to immigrants, subtracting from each overall category costs the incidence of migrant population relative to that cost. The overall cost of each item is drawn from the “Relazione della Corte dei Conti sui rendiconti generali dello stato”. However this approach is not used for the monetary transfers estimation item.

⁷⁴ This incidence comes from the Agenzia Sanitaria nazionale on the percentage of hospital admissions attributable to migrant population.

2. **Public education.** Since the foreign students in the school year 2012/2013 amount to 8.8% of total students, it follows an expense of about 3.6 billion €. However this sector has a structure and dynamic on which costs for public employee amount to over the 90% of the total cost, compared with expenditures for health public employees which amount to 32% of total cost.
3. The item related to **local and social service** totally amount on 7 billion €. Inside this category there are different services as those intended to senior citizens, disabled people, family and their children, income support, social exclusion, service intended to migrants and so on. This latter service includes all those services for the social integration of foreigners, such as reception facilities, Italian language courses and cultural intermediaries with an incidence of about 8.5% on the overall expenses of this item, reaching an amount equal to 600 million €.
4. **Housing allowances.** In the recent years this type of item linked to migrant population has given rise to many controversies due to the public opinion that immigrants have more rights than natives to reside in public housing. This is mainly due to a dual reason: on the one hand whereas the public housing heritage appears to be rather small compared to the European average, on the other side whereas about 20% of natives and 80% of immigrants live in rented accommodation, the share of people who requires support the public is greater among immigrants⁷⁵. According to Federcasa estimates, housing expenditures related to foreign citizens is equal to 400 million €.
5. **Justice.** This item covers expenses related to courts and prisons. With an incidence of migrants equal to 25% on the total expenditures, the cost associated to them amounts to 1.9 million €. However this sector, as education, has a structure and dynamic on which the majority of expenses related to justice is referred to public employees.
6. **Ministry of Interior** item covers expenditures related to immigrant detention, reception centers and public order costs and includes also resources that comes from the EU⁷⁶. Altogether expenses referred to migrant population was estimated of about 1 million €, with the higher amount which bound to the management of refugees⁷⁷.

⁷⁵ For this reason some municipalities introduce some measures related to “anzianità di residenza” necessary to gain access to public housing. One example is the municipality of Padua, which recently increases the minimum threshold to 20 years of residence.

⁷⁶ Namely Fai and Fsi which amounts to 53 million € in 2013.

⁷⁷ Cda, Cara, Sprar, Sispa, Cie.

7. **Monetary transfers.** This item covers those transfers intended to income support as Cig, mobility grants and unemployment, family allowances which this latter amount to 1.2 billion € in 2013, and old-age benefits. Since in this year migrant over-65 population is equal to 130 thousands, the total transfer addressed is equal to 9 million €⁷⁸.

Table 2.4. Overall Revenues and Expenditures of Italian Budget relative to migrant population (in billion of €) with standard cost approach, 2013

Revenues		Expenditures	
Irpef	3.2	Health	3.9
V.A.T	1.5	Education	3.6
Mineral oil tax	0.9	Social services	0.6
Lotto and lotteries	0.2	Housing	0.4
Permits and citizenship tax	0.3	Justice	1.9
<i>Total tax revenues</i>	<i>6.1</i>	Ministry of Interior	1.0
Social security contributions	10.5	Monetary transfers	2.1
<i>Total Revenues</i>	16.6	<i>Total Expenditures</i>	13.5
Net contributions:	+3.1		

Source: Idos and Fondazione Leone Moressa elaborations on Mef and Istat data

As shown in the Table 2.4, net contributions of migrant resident population to the Italian State Budget are positive and equal to 3.1 billion of € overall. Examining the individual items of Revenues of State Budget relative to migrant population, the highest contributions comes from social security contributions, with an amount equal to 10.5 billion € in 2013. However this item has to be considered only in the short run since only for a certain phase this type of contribution could be used to finance the Public Purse⁷⁹. The amount of this item results to be higher than all of other components because, even if the majority of migrant population works in low-skilled with underpaid employments, the relative activity rate is then higher than that of native population owing to the different demographic composition. The second relevant item of revenues is Irpef with a sum equal to 3.2 billion €. This type of contribution if compared with that of native population results to be limited, probably due to lower wages, as mentioned above, but also due to the large percentage of migrants working in the black market or that not fully declare what actually receives.

On the expenditures side, the highest expenditures comes from the health item. However in this case is necessary to specify that over the overall expenditures in public health of 109

⁷⁸ The overall over 65 population is equal to 16 million in 2013.

⁷⁹ Instead the impact in the long run will be discussed in the third chapter.

billion € in 2013, the share relative to migrant population is only 3.5%. This smaller amount probably comes from a predominantly young and healthy migrant population than that of native. But migrants could have also some obstacles as communication difficulties or in carrying out the administrative-bureaucratic procedures for access to health services and so on, that could reduce the access to the Italian health system. The second relevant expenditures item is the public education with 3.2 billion €. In this case is necessary to notice that, even if migrant population affects considerably this item⁸⁰, education is the sector where the public employees costs are preponderant⁸¹, and this could justify this large amounts resulting from this method of estimation. The third relevant item of expenditures regards the direct monetary transfer equal to 2.1 billion €.

This item covers social security spending that, with 130 thousands of over 65 migrants in 2013, is equal to 900 million €. However this subheading is likely to increase in the next years due to the higher share of over 65 migrant population. Furthermore this item covers also family allowances and transfers for income support on which foreign population affects particularly.

Nevertheless, Idos (2015) highlights that the use of standard cost approach for the expenditures side could cause some overestimations. Since typically the incidence of public employees on the total public spending amounts to about 20% for each category considered⁸², the migrant average cost estimated for each category will include also those costs, influencing negatively that amount when the presence of public employees is very significant. One example is expenditures incurred by the Italian Budget for migrant population in education or justice sectors, where public employees incidence is of about 90% on total expenditures per item. For this reason could be more appropriate estimate expenditures through the marginal cost approach, which tries to estimate the effective incidence of new foreign resident citizens on the expenditures of pre-existent services. Considering the period between 2000 and 2013, the public expenditures seems to be increased of about 120 billion €, equal to 12 billion € per year. From these 12 billion, it is necessary to estimate how much of this increase is attributable to the foreign population. Since in that period the average incidence of foreigners was about 5% on the total population, it appears that the marginal increase associated to migrants doesn't exceed the 600 million per year. However this amounts regards the overall expenditures of migrant population and not only the items analyzed above. In addition to

⁸⁰ Through the disadvantaged socio-economic conditions and the poor command of Italian language.

⁸¹ Over the 90% of overall education expenditures are allocated to public employees.

⁸² Since the total public expenditures is equal to 800 billion € in 2013, the cost associated to the public employees is equal to 163 billion overall.

these expenses must be considered also the part of monetary transfers that remained unchanged because the relative estimates exempt from the standard cost approach, which amount of 2.6 billion € (Table 2.5).

Idos (2015) further declares that, on the revenues side, to make a more accurate estimation of the fiscal impact of migration, is better to exclude social security contributions from the evaluation because social security contributions are considered as provision of deferred pay in the long run. In this case the net fiscal contribution of migrant resident population in Italy results to be positive and equal to 2.9 billion €.

Table 2.5. Overall Revenues and Expenditures of Italian Budget referred to migrant population (in billion of €) with marginal cost approach and omitting social contributions, 2013

Revenues		Expenditures	
Total tax revenues	6.1	Public spending	3.2
		<i>of which monetary transfers</i>	2.6 *
		<i>of which marginal annual increase</i>	0.6
Total Revenues	6.1	Total Expenditures	3.2
Net contributions:	+2.9		
* monetary transfers item is different from the previous value because here there are 500 millions of monetary transfers referred to housing policy sector and municipal social transfers that previously were accounted in other items			

Source: Idos and Fondazione Leone Moressa elaborations on Mef and Istat data

All reports reviewed shows that, despite these analysis not yet reached a complete and accurate estimation, immigrants contribute positively to the Italian Public Budget in the short term, even if with an incidence that not exceeds the 0.3% of GDP. This confirm the international analysis which predict that net migrant contributions never exceed the 0.5% of national GDP.

The incidence of resident immigrants expenditures on total public expenditure appears to be very modest: 1.7% with the first method of calculation and 0.4% with the second.

Furthermore, revenues and expenditures of the Government Budget are strongly conditioned by the fact that in Italy the migration phenomenon is quite recent and the first generation of them are in working age, representing almost entirely an active position in the labour market.

2.3 Impact of migration at local level: the case of Lombardia

As seen in the previous section, the fiscal impact of migration in Italy is positive, even if in a slight amount. Nevertheless, according to Pellizzari (2011) whose analyses the different probabilities of access to welfare state between EU/extra-EU migrant and native population in our country, crossing sample data with administrative data⁸³, appears that extra-EU migrants are more likely to demand welfare services than EU migrants and natives.

Considering that migrant population concentrates mainly in areas characterized by an higher demand of unskilled labour, they work in jobs that are comparatively less well paid than those hold by natives, affecting almost certainly the local welfare system more significantly than observable similar Italians. Hence if foreign population doesn't represent an expense for the public finance nationally, could represents a burden at local level. As consequence is interesting to examine what is the fiscal impact of migrant population at regional level, distinguishing further the relative impact at citizenship level.

Hence, the objective of this section is to analyze whose nationalities impact positively or negatively on the local budget of the region characterized by the highest share of foreign resident population with 1.3 million of individuals in 2013: Lombardia.

Euròpolis (2015), based on 2013 ORIM data, estimates the fiscal impact of migrant population on this region adopting a static approach⁸⁴ through the estimation of net contributions on the Regional Budget. For this estimation in the revenues side are considered Irpef, social contributions and VAT, whereas on the expenditures side are analyzed health, education and pension system⁸⁵.

Foreign residents in this region contribute positively to the regional budget overall, with an amount equal to about 33 million of €⁸⁶, confirming results of researches reviewed in the previous section.

Euròpolis developed a further analysis, decomposing the regional fiscal impact of immigration with respect to the first five nationalities living in this region, which represents the 46% of total migrant population residing in this region: Romanians (14.52%), Moroccans (9.67%), Albanians (9.51%), Egyptians (6.60%) and Chinese (5.27%). The objective of this

⁸³ Eu-Silc and Inps (ISEE) 2007.

⁸⁴ Estimation in a given year of net contributions of migrant population in Lombardia, that in this case are estimated overall.

⁸⁵ Estimated through the standard cost method.

⁸⁶ With total revenues equal to 4.21 billion € and total expenditures equal to 4.18 billion €. Higher contributions comes from V.A.T (2.3 billion €) item whereas the higher benefits comes from education item (2.7 billion €).

distinction is to examine what is the impact of different migrant nationalities because, having different demographic characteristics, could influence the regional budget in a different way. As shown in the Table 2.6 it is possible to split the fiscal impact of different nationalities in two groups according to the sign of regional budget balance. The fiscal impact of Romanians and Moroccans is negative with net overall contributions equal to -12.3 and -94.5 million of € respectively, whereas the contrary occurs for migrants who comes from Albania, Egypt and China with net contributions equal to +11, +74 and +133 million of €. The negative result depends mainly by the fact that the first two foreign nationalities represent a very incurred cost on the education item which is not adequately compensated by the tax return taken in question. The contrary instead occurs for the other three nationalities.

Table 2.6. Revenues and Expenditures of Regional Budget related to the first five citizenships of migrant population residing in Lombardia (in million of €), 2013

Romanians				Moroccans			
Revenues		Expenditures		Revenues		Expenditures	
Irpef	143.8	Health	149.8	Irpef	69.9	Health	101.6
Social security cont.	75.3	Pension	20.5	Social security cont.	102.8	Pension	13.7
V.A.T	307.7	Education	368.7	V.A.T	190.8	Education	342.8
Total Rev.	526.7	Total Exp.	539.1	Total Rev.	363.5	Total Exp.	458.1
Net contributions: -12.3				Net contributions: -94.5			
Albanians				Egyptians			
Revenues		Expenditures		Revenues		Expenditures	
Irpef	107.9	Health	108.6	Irpef	91.5	Health	68.2
Social security cont.	73.0	Pension	13.5	Social security cont.	50.4	Pension	9.3
V.A.T	195.8	Education	243.4	V.A.T	186.9	Education	176.3
Total Rev.	376.7	Total Exp.	365.5	Total Rev.	328.7	Total Exp.	253.8
Net contributions: +11.2				Net contributions: +74.9			
Chinese				First five citizenships			
Revenues		Expenditures		Revenues		Expenditures	
Irpef	108.4	Health	51.3	Irpef	521.5	Health	479.5
Social security cont.	77.3	Pension	7.4	Social security cont.	378.8	Pension	64.4
V.A.T	116.0	Education	109.5	V.A.T	997.2	Education	1240.8
Total Rev.	301.7	Total Exp.	168.2	Total Rev.	+1897.4	Total Exp.	1784.7
Net contributions: +133.5				Net contributions: +112.7			

Source: CIFREL elaborations on ISTAT, ORIM, Eurostat and INPS data

Chinese is citizenship that most contribute to the regional budget because declares much higher average incomes than other nationalities, thus contributing with very high Irpef tax and requesting lower welfare access to health and education system, offsetting in this way the negative balance of Moroccan immigrants, even if their share on the total migrant population in this region is the smallest (5.27%). In particular, comparing regional budget's items of these two latter nationalities, which also represents the two opposite fiscal impact on regional

budget, it is interesting to underline which demographic characteristics (at individual and at household level) generates differences among these items, rather than the only difference in share of foreign nationals in Lombardia that not always affect these values.

For the Irpef item for example, appears that difference in the amount is caused by difference in individual average income (569€ Moroccans versus 831€ Chinese monthly), in household composition (3.48 Moroccans versus 2.97 Chinese), in labour market participation suggested by household average income (1.032€ Moroccans versus 1.594 € Chinese) and in the share of individuals paying Irpef on total migrants of same nationalities (30% Moroccans and 46% Chinese). For VAT item, values diverge mainly by the difference in incidence on total migrant population in this region (9.67% Moroccans versus 5.27% Chinese) but also by different household composition. In fact Moroccans which are characterized by larger households, results that pay higher VAT than Chinese households. For social security contributions' differences, appears that in this case the share of a nationality influence in a consistent way on the amount of this item. In fact even if Moroccans pay on average 1.051€ per month compared with the 1.451€ of Chinese for social security contributions, the amount of Moroccans appears to be higher than this latter nationality.

Considering the expenditures side, disparity on health items arises mainly from the difference on average age (35 for Moroccans versus 34 for Chinese) causing, even if appears only a small age difference, an expense per capita of about 1.039€ yearly for the larger nationality and 962€ for the smaller nationality.

The pension system item covers benefits on assistance, income support and old age/invalidity/survivors but in this case Euròpolis doesn't have available data per citizenship. According to INPS data which provides information distinguishing pension expenditures for EU and extra EU foreigners overall, appears that even if extra-EU foreigners are more welfare recipients than others (14.353 versus 3.172), they receive on average lower amounts (8.071€ versus 10.678€ yearly and per-capita)⁸⁷. In this case, analyzing differences on pension items of two extra-EU countries, we can say that these distinctions depend especially by the share of each nationality, as occurs for social security contributions described above.

Furthermore, with regard to education item, distinguishing expenditures per education level⁸⁸ appears that whereas educational expenditures stand out for the average number of cohabitant underage children (0.97 Moroccans versus 0.61 Chinese) with expenditures equal to 3.500€ for Moroccans and 2.035 for Chinese⁸⁹, tertiary expenditures differences depends on number

⁸⁷ In this region, about 53% migrant recipients of pension system receive benefits on assistance, rather than on old age and income support.

⁸⁸ Educational (from primary school to upper secondary school) and tertiary expenditures.

⁸⁹ Intended as annual per capita education expenditures.

of enrollments, without necessarily evident linkages with the number of adult children cohabiting. In this regard appears that young Chinese are more enrolled in academic world than young Moroccans.

Finally, the fiscal impact of migration at regional level examined confirms what was said at national level, namely that migrant population contribute positively on the Public Budget overall. However this impact, both positive and negative, stands out on nationalities. This evidence is largely caused by the different demographic characteristics of each migrant nationality, instead of the UE/ extra-UE origin as sustained by Pellizzari (2011). In fact, taking in consideration the two extra-EU nationalities which impact on the local budget in the opposite way, Moroccans and Chinese, appears that the worst fiscal impact was sired by Moroccans and most positive impact by Chinese migrants. On that note, raises the question whether Chinese population represents a solution to solve economic, financial and demographic problems or not. In this regard is important to highlight that, despite the great entrepreneurship of Chinese population, arises frequent instances of illegality. Just think of numerous poor working conditions inside those companies managed by Chinese citizens, with laboratories as dormitories, abusive kitchens, irregular labour force and tax avoidance. For this reason, notwithstanding results and according to Gabriele (2012), there is a clear necessity to adopt three types of measure in particular: 1) measures to combat irregular labour market, in order to ensure the payment of taxes and contributions; 2) measures to facilitate the establishment and integration of each migrant and his families in order to allow the creation of favorable conditions for the procreation; 3) a measure to sustain the development of human capital, especially for second generations, in order to have the possibility to labour market access with better skills and to ensure a more consistent contribution to public finance .

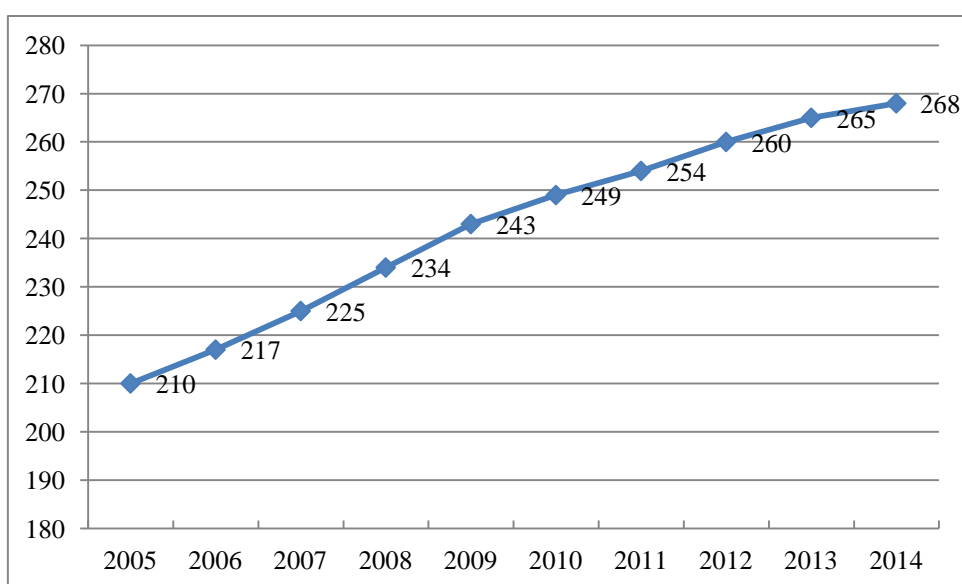
CHAPTER 3. THE CONTRIBUTION OF IMMIGRANTS TO THE ITALIAN PENSION SYSTEM

3.1 Actual pension system in Italy and the sustainability of migrant population

In 2014, the Italian total general government revenues were estimated equal to €776 billion (48% of GDP), whereas the total general government expenditures equal to €825 billion (51% of GDP), with a deficit equal to €48 billion (-3% of GDP) and general government gross debt equal to €2.137 billion (131.9% of GDP).

According to the OECD (2015), Italy is the country that spend in terms of GDP the largest proportion of national income on public pensions among OECD countries with a rate equal to 16,5% of GDP (€267 billion)⁹⁰, preceded only by Greece with a rate equal to 17.1% in terms of GDP, whereas is in last place on education investments⁹¹.

Figure 3.1. Italian total pension expenditures over the years (billion of €)



Source: our elaborations on Eurostat database

As seen in the Figure 3.1. however, the overall pension expenditures has grown rapidly over the years, switching from €210 billion in 2005 (14.1% of GDP) to €268 billion in 2014 (16.5% of GDP). This growth, if analyzed from the contribution revenues that fund pension system and cash outflows intended to pensions point of view, depends on a number of

⁹⁰Data comes from Eurostat database. In particular public pension covers the old age benefits for 11.6% on GDP (€187 billion) and survivors benefits for 2.7% on GDP, whereas all other benefits affect GDP only for the 2.1%.

⁹¹ Education investment is stable and equal to 65.5 billion of € per year, namely the 4.1% of GDP.

reasons, that in this elaboration are broken down in legislative, demographic, economic and financial terms.

In legislative terms, the slowness on transition from earnings-based scheme to contribution-based scheme introduced by Dini Reform in 1995, further increase the pension expenditure. In particular in a pay-as-you-go system (PAYG), where actual active generation provides through the social security contributions for the funding of retirement age generations, this leads to a very supported spending on the current younger generations. In this respect, in 2012 was introduced Fornero Reform⁹² with the objective to reduce the pension expenditure and to improve the generational equity (applying contributive-based scheme to all retirees from 2012 and a mixed scheme to those retirees whose in 31/12/1995 already accumulated 18 years of contributions).

In demographic terms, the lengthening of life expectancy (20.4 years at 65years people) and the reduction of births creates an extension on administration period of pensions and an increase of aging population rising as consequence the pension expenditures and reducing the active population which could sustain this type of public spending.

In economic terms, instead, the increase of the unemployment rate together with the introduction of new flexible forms of work reduce the contribution base and the national payroll necessary to funding pensions.

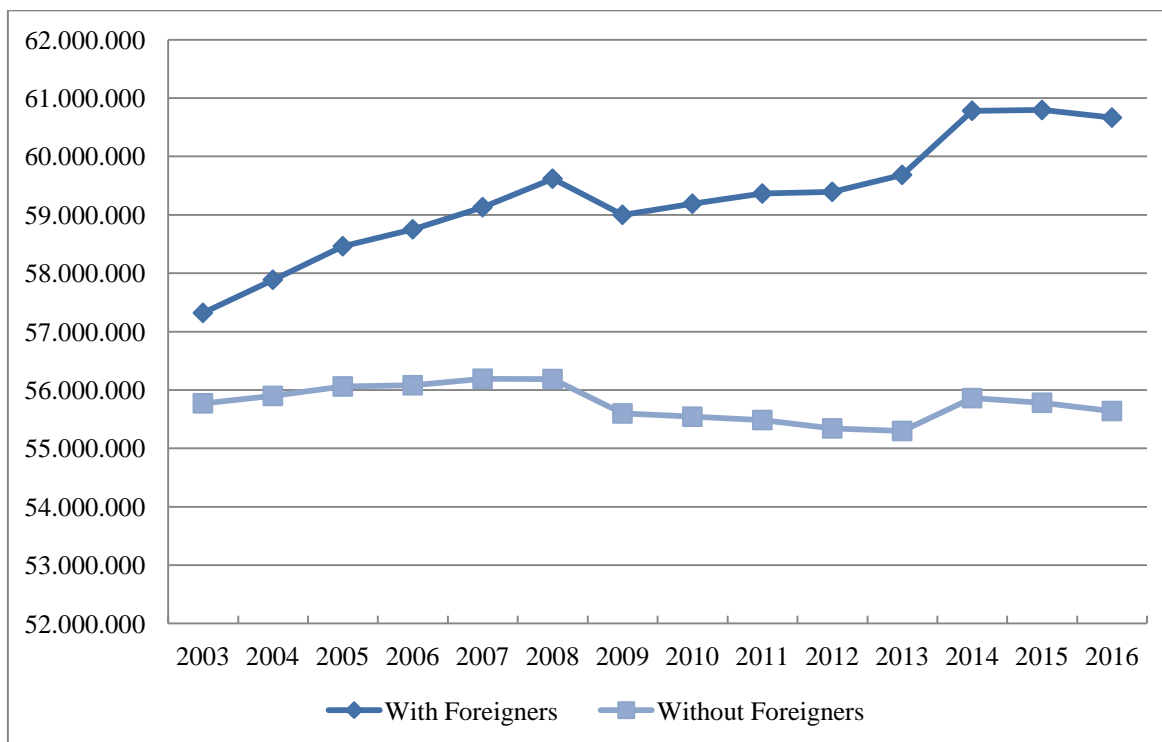
In financial terms, the disparity among the resources obtained to finance the pension system and the total pension expenditures requires the government intervention in a time of deep financial crisis, increasing as consequence the State Budget deficit.

According to problems described above, immigrant population could represent a solution to sustain the pension system. In fact, in demographic terms for example, the foreign population who decides to reside in Italy can mitigate imbalances resulting from aging population through both its earliest age (34 foreigner versus 46 native years old on average) and its highest fertility rate (1.97 foreigner versus 1.29 native children average per woman). In

⁹² In particular, the reform requires the contribution-based system in the calculation of pension for all workers, even those who - as a result of the Dini reform of 1995 - were building their own retirement with the more generous compensation system. The pension is thus based on the payments made by the employee and employer and not the last earned salary. Simultaneously, the Fornero reform has raised the retirement age of men and women, establishing the conditions for the "old age pension" (according the chronologic age): at least 20 years of contributions and 66 years for women and men in the public service (public and private sector), 62 years for women in the private sector (then 66 years and 3 months in 2018), 63 years and 6 months for self-employed women (which will gradually become 66 years and 3 months in 2018). Also it abolishes the "retirement pension" (based on the number of years of work) replaced by "early retirement pension": today one must have worked 41 years and 3 months for women or 42 years and 3 months for men. In addition, the reform provides for the periodic adjustment of retirement requirements elongation of life expectancy.

addition, in the absence of migration, Centro Studi Confindustria (2016) confirms that Italian population would have been reduced by 132 thousand of units from 2003 to 2016 due to negative natural balance.

Figure 3.2. Resident population in Italy with and without migrant population



Source: CSC elaborations on Istat data

Instead, because of new foreign arrivals and their relative higher number of births (75.000 births versus 5.000 death toll) in the same period foreigners increased the Italian resident population of about 5 million, achieving 60.7 million overall in 2016. It also possible to observe that migrant population contribute to sustain demographic imbalances through the old-age dependency ratio⁹³. In fact according to CSC estimation (2016), in 2015 old age dependency ratio was equal to 33.7% and in the absence of migrant population this ratio would have resulted higher of 3.3 percentage points. Furthermore, migrant population affect mainly the working age population (15-64), accounting for 4 million of people in 2015⁹⁴. In economic terms instead, since migrant population has higher employment rate than Italians (58% versus 55%) could represents an advantage, increasing through their workforce the contribution base and the national payroll.

⁹³ Ratio between the number of over 65 and working age (15-64) population.

⁹⁴ In this regard, migrant population represents the 10% on the total italian working age population.

In legislative terms instead, in a PAYG system which is slowly switching to the contribution-based scheme, actual working age generation still transfers resources to retirees. Considering that immigrants prevail in the working age group, through their integration in the labour market they can help to alleviate the tax burden of actual working-age generation, increasing the tax base used to finance pensions. In fact, as seen in the 2.2 chapter, foreign residents paid social contributions for an amount equal to 10.5 billion of € in 2013, and 10.9 billion of € in 2014.

Table 3.3. Estimation of social security contributions of migrant workers in Italy

Year	Number of migrants employed	Incidence on total employed (%)	Social contributions paid (billion of €)	Incidence on total social contributions (%)*	Number of retirees which receive pension through immigrant contributions**
2009	1.790.000	7.9	7.92	3.7	520.000
2010	1.910.000	8.5	8.47	4.0	550.000
2011	2.030.000	9.0	9.28	4.3	580.000
2012	2.110.000	9.3	9.72	4.5	600.000
2013	2.180.000	9.8	10.29	4.8	620.000
2014	2.290.000	10.3	10.90	5.0	640.000
			56.58		

* Incidence was underestimated because social contributions covers other transfers in addition to pensions
** Number of retirees means number of pension income paid with foreign worker contributions. This result was obtained dividing total migrant contributions with average pension income, provided by Istat.

Source: FLM elaborations on MEF and Istat data

According to FLM (2016), allocating the overall migrant social security contributions paid in 2014 to the average pension income (17.031€), results that migrant regular workers finance pension to 640.000 native retirees. Furthermore, adding up all the social security contributions paid in the last five years, and taking into account the evolution of tax rate over these years, it is possible to say that immigrants from 2009 to 2014 paid € 56.58 billion in contributions, a sufficient amount for a budgetary maneuver.

Nevertheless, since migrant population is younger than natives, it registers very small retirement flows than these latter (130.000 migrant over 65 versus 12 million Italians in 2013). In fact, considering the relationship between the social contributions paid (€ 10.5 billion) and pension expenditures provided (€ 900 million)⁹⁵ by/to migrant residents, it reveals that migrant population contributes 12 times more than the amount claimed by them to pension system.

⁹⁵ Amount estimated by Fondazione Leone Moressa on Mef and Istat data.

In this respect it should however be noted that, according to INPS chairman Tito Boeri, in Italy there are some immigrants who paid social contributions without requiring it when they return to origin country, leaving an amount equal to almost €3 billion per year⁹⁶.

From these considerations, it is possible to say that currently migrant population provides a positive support to Italian pension system, sustaining part of Public expenditures for native pensions and contributing to alleviate the rigidity of the budgetary constraint. However it is important to highlight that part of migrant workers are employed in irregular conditions or in lower skilled jobs. If foreign population had higher education level or there were more stringent rules against the black labor market, it is clear that foreign population bring broader social security contributions and thus even a further positive support to the Italian pension system.

3.2 Retirement flows of immigrant resident: estimation in the medium term

In accordance with the previous section, resident migrant population is providing an important contribution to the Italian pension system repairing the relationship between retirees and active workers in the labour market, that until now is heavily weighted in favour of the former. However, this benefits cannot last forever, because also migrant population sooner or later are intended to aging. In this respect, a research developed by Marinaro (2014)⁹⁷ makes predictions on the immigrants access to the pension system during the 2010-2025 period⁹⁸. Although the 2012 pension reform initially requires the retirement after the age of 66 for men and 65 for women, since this not constitute stringent constraints, the author hypothesized that men/women start to claim their pension at 65 years old. According to that estimation, whereas in 2010 the overall Italian population was equal to 60 million of which the 93.7% by Italians and 6.9% (4 million) by foreigners, the over 65 population was equal to about 12 million, of which the 99.2% by Italians (12 million) and the 0.8% by foreigners. (98.000). According to Istat predictions, fifteen years later Italian population will reach 65 million of people, composed by the 87.7% by Italians and the 12.3% by foreigners (8 million). In the years following the 2010 it is expected that over 65 population will increase of 1 million every 5 years, reaching in 2015 an amount equal to 16 million of people in retirement age, composed for 97.1% (15 million) by Italians and 2.9% (452.000) by foreigners.

⁹⁶This probably occurs for the lack of adequate information or for bureaucratic problems.

⁹⁷ Marinaro R. in European Migration Network, 2014.

⁹⁸ This study was analysed after the introduction of Fornero law.

Table 3.4. Average retirement flows of immigrant and native residents in Italy, (2010-2025)

Period covered		Entrances per year	Overall entrance in the five-year period	"Differenziale pensionistico"*
2011-2015	Foreigners:	15.000	75.354	1 every 46
	Natives:	672.000	3.360.000	
2016-2020	Foreigners:	27.000	135.000	1 every 27
	Natives:	711.000	3.555.000	
2021-2025	Foreigners:	43.000	212.658	1 every 19
	Natives:	745.000	3.725.000	

* Frequency of possible foreigners candidates for pension relative to natives. This value comes from the relationship between the overall entrances of foreigners and natives during the five-year period

Source: our elaborations on EMN (2014)

As shown in the Table 3.4, during the 2011-2015 period, average retirement flows reach an amount equal to 15.000 for foreigners and 672.000 for natives yearly, for an overall amount during the five-year period equal to 75.000 for foreigners and 3 million for natives in retirement age. In the period 2016-2020 instead, the average retirement flows will achieve 27.000 for foreigners and 711.000 for natives yearly, reaching in the five-year period an amount equal to 135.000 for foreigners and about 3 million for natives overall. In the last five-year period, the average retirement flows will be equal to 43.000 for immigrants and 745.000 for natives yearly, achieving in that period about 213.000 foreigners and 4 million of natives in retirement age overall.

As shown in the last column of the Table 3.4, it is possible to observe the so-called “differenziale pensionistico”, understood as how many Italians are in retirement age for every immigrant in the same age condition. In the first five-year period, arises that 1 migrant every 46 natives enter in the retirement age; in the second five-year period 1 every 27 and in the last five-year period 1 every 19.

From this analysis it is possible to sustain the fact that since migrant population is on average younger than native population also during this estimated period (2010-2025), until 2025 immigrants will impact on the pension system only marginally, still helping as consequence to sustain the Italian pension system. However considering that “differenziale pensionistico” will gradually decrease over the years, even the contribution that foreigners give to the Italian pension system will gradually running out.

In an article published by La Stampa in 2016, are developed further forecasts of pension retirement flows, crossing the demographic forecasts with studies on social security spending forecasts. This analysis shows that the 2030 will be the “zero year, namely the year on which will enter in the retirement age the so-called baby boomers⁹⁹, after having achieved the 66-67 years old. In that year hence, will be a peak of retirement demand which will create a shock to the Italian pension system¹⁰⁰. According to Blangiardo (2016) from 2030 the situation will be further exacerbated by what he calls the “invecchiamento importato” effect, because he estimated that during that year will retire about 200 million of migrants per year. This amount is very different from the estimates made above, because Blangiardo says that many immigrants who were in retirement age before, didn’t enter into pension as that they may have started to pay contributions only later¹⁰¹.

Returning to retirement flows, there are still many doubts today about the possible costs / benefits of immigrants on the national budget if they decide to **stay in Italy or return to the motherland after retirement**. In this regards exists three different choice’s hypothesis that they could adopt. The first hypothesis sustain that migrant population, after the retirement remain the settlement country.

To confirm this assumption there is a study developed by Lunaria (2013) with regard to 2010 on which shows that the 76.6% of foreign-born pensions were delivered in Italy, whereas only the 23.4% in other countries. The second hypothesis sustain that migrant population, after the pension achievement, return in the origin country maintaining the destination country citizenship in order to have the access to all public services in the case of necessity, as health service for example. In these two first hypothesis hence, there will be a saving for Italian country because immigrants can make use of all possible public services available. On the contrary the third theory sustain that immigrants after a certain period on which stays in the settlement country, they will return in the origin country, creating a sort of “temporary migration”. This theory was sustained by Dustmann (2015) on which he wanted to show that about the 50% of immigrants settled in Europe leave the territory after 10 years¹⁰². Dustmann sustain that although there are strong empirical evidences, currently available studies have not taken into consideration this hypothesis due to lack of available data. However, the driving forces that affect immigrant decision to stay only for a certain period in the country of

⁹⁹ People born between 1964 and 1965 reaching 1 million of births in those years.

¹⁰⁰ This shock was estimated to last until 2035, when the contribution-based system will be completely introduced improving that situation.

¹⁰¹ For example because they became regular worker only in old age (40 years old).

¹⁰² Whereas those settled in other continents the percentage decrease to 20% of immigrants.

settlement are manifold¹⁰³. However the temporariness decrease the amount of contributions that a migrant can pay in the settlement country. The lower propensity of immigrants to invest in human capital, as language training; generates lower earnings and therefore they pay lower direct taxes and social contributions. In addition, because of lower wages, they tend to replace the leisure with working time (increasing the participation rate to the labour market), thus reducing consumptions and as consequence indirect taxes, allocating the gains mainly in remittances. Temporariness however reduces the costs for the immigrant population because being that immigrants decide to stay only for a certain period of their working age, they do not represent a cost which is what represent people of retirement age. In particular temporariness represents a benefits in terms of welfare services costs overall. In pension expenditure instead temporariness creates twofold opposite impact. While the temporary nature generates savings in terms of average amounts to be paid in the form of pensions to immigrants¹⁰⁴, on the other hand however, it generates costs as immigrants are still entitled to a pension. In this latter case in fact, INPS underlines that in case of permanent return to the origin country¹⁰⁵, the immigrant reserves all pension rights and social security accrued in Italy, and he can benefit from these rights even if Italy did not strict bilateral agreements with the country of origin¹⁰⁶.

Going back to the previous retirement flows topic, despite Boeri says that in the short term immigrants make a contribution to the Italian pension system, Blangiardo instead says that is not possible make a simple reasoning cash in the short term. In fact, although in the short run foreigners make a positive contribution, in the long run the contributions that they have paid will be given back by right, together with other issue that we will discuss below.

The Italian pension system characterized by the notional defined contribution system, the amount of pension benefits are directly related to social security contributions paid during working years. The fact that there will be an entrance of a growing number of subjects in old age (such as immigrants) who, due to contributive breaks mainly due to an unstable labor market and to a strong use of flexible working contracts, will be able to count only on a modest contribution for pension purposes, they will receive very **low pension benefits**. This in turn implies that immigrants, after helping to finance the pensions of the natives, are likely

¹⁰³ Some immigrants could decide to remain in the settlement country only for the time necessary to collect human capital considered fundamental in the origin country. Other migrants could decide to stay in the country only until they reach a predetermined amount established at the beginning of economic migration.

¹⁰⁴ Due to lower contributions and hence lower pension amount per individual.

¹⁰⁵ Both EU and non-EU country

¹⁰⁶ However, as pointed in the INPS site, these benefits can be perceived only after achieving the 66 years, even if even without having reached 20 years of contributions.

to run into difficult situations such as the poverty risk, burden on any additional forms of Italian public welfare.

Unfortunately there are no analyzes relating to **poverty risk** of migrants after retirement for the Italian case, but it is possible to take as a reference the results from a similar analysis for Denmark¹⁰⁷. In fact, according to this study, the poverty risk of over 50 immigrants which come from four countries outside the OECD (Turkey, Iran, Pakistan, Vietnam) is very high compared to natives. In the case of Denmark this is because in that country to enjoy the full board, an individual must reside in the territory for at least 40 years and still be fully integrated into the labor market in order to be able to pay higher social security contributions. In Italy you can say such a thing taking account of the above considerations of our social security system and therefore the risk that immigrants once they enter into retirement come in poverty is very high in Italy.

After establishing that in Italy there will be an increase in the risk of poverty for all those individuals who once entered in retirement will receive a minimum pension, it is interesting to analyze how an individual already in precarious situations sees their standard of living change in the moment that he ceases to work. This is possible by the **net pension replacement rate** which, through the relationship between the individual net pension entitlement and the net pre-retirement earnings¹⁰⁸, estimates in percentage terms how much of the last earnings of working age receive in terms of pension benefit (or how much he loses). According to OECD data refer to 2014, the net pension replacement rate for those who have an average worker earnings (AW) about half that of the Italian average¹⁰⁹, as for the majority of immigrants, is equal to 82.2%, against the 79.7 % referred to those who have an AW equal to the Italian average.

The net pension replacement rate referred to immigrant population therefore, if compared with the poverty risk of the same, might suggest that despite the increasing trend of poverty once immigrants enter into retirement, these individuals see further worsen their living standards "only" 18.8% of the earnings they received working age, compared with a reduction of 20.3% for those who have an AW equal to the Italian average. Overall, the fact that this rate is high is mainly due to the recent pension interventions by raising the retirement age and the years of mandatory contribution to retire. Without this intervention the Net pension

¹⁰⁷ Jakobsen and Pedersen (2016).

¹⁰⁸ Taking into account personal income taxes and social security contributions paid by workers and pensioners.

¹⁰⁹ In 2014 the Italian AW was of about 30.463€.

replacement rate would be reduced over time, due to the shift from an overly generous system (such as salary) to a less generous system (the contributory)¹¹⁰.

In conclusion, based on the methods described above, the retirement flows of immigrants until 2025 are still small quantities due to the younger average age of immigrants than natives. It is not clear however what will be the advantages or disadvantages if an individual once came to the retirement decides to stay in Italy or return to their country of origin, although apparently seems that if he decide to move to the motherland will bring savings to the Italian constraint budget only in terms of spending on health and welfare services. Being that every immigrant working life has generally paid less contributions than any native, this implies that it will have a much reduced pension in the future. This in turn will increase poverty. There is therefore the need for the state to act in this matter in order to promote policies to reduce inequalities in the labor market, to encourage professional training, as well as to protect the pensions of low-paid workers.

3.3 Effect of immigrants on the long run sustainability of the pension system

As seen in the previous paragraph, Italy is one of the countries that spends most on pension expenditure in terms of GDP.

Through to the analysis performed by RGS (2016) it is possible to analyze what are the medium-long term forecasts (2010-2060) in pension expenditure in terms of GDP, resulting from a combination of demographic component forecasts (fertility rate, life expectancy rate and net migration) and macroeconomic components forecasts (activity rate, unemployment rate, employment rate, national productivity and real GDP).

The objective of this analysis is to verify how immigrants, being one of the demographic components considered, impact on pension expenditures in terms of GDP, through a sensitivity analysis.

First of all it is necessary to start analyzing the demographic and macroeconomic predictions on the national baseline scenarios and the relative pension expenditures on GDP.

The demographic component referred to Istat (2011) predictions, updated with predictions of Italian population at 1st January 2015, considered hence as base year. Demographic predictions as shown in the table 3.5, are accounted as follows: fertility rate will achieve an average amount equal to 1.6 children per woman in 2060; life expectancy rate equal to 85.9

¹¹⁰ Guttadauro (2015) on RGS 2014 estimations.

for men and 90.8 for women; net migration will achieve about 182 million of units in 2060 (after the peak of 251 million of units in 2020).

Table 3.5. Predictions and results of pension expenditures in terms of GDP (2010-2060) with National baseline scenarios

		2010	2020	2030	2040	2050	2060
Demographic components	Fertility rate	1.5	1.5	1.5	1.5	1.6	1.6
	Life expectancy rate						
	<i>Men</i>	79.3	80.9	82.5	83.8	85.0	85.9
	<i>Women</i>	84.3	85.9	87.5	88.8	89.9	90.8
	Net migration (million)	200	251	220	206	194	182
Macroeconomic components	Activity rate 15-64 (%)	62.0	63.7	67.1	69.9	70.4	70.2
	Unemployment rate (%)	8.4	9.6	7.4	6.0	5.6	5.5
	Employment rate 15-64 (%)	56.8	57.3	61.8	65.2	66.0	65.9
	National productivity (%)		-0.1	0.9	1.5	1.6	1.5
	Real GDP (%)		0.3	1.8	1.6	1.3	1.5
Results of predictions	Pension expenditure on GDP (%)	14.8	15.2	15.0	15.3	15.0	13.7

Source: RGS elaborations on Istat and Def data (2016)

For the macroeconomic components predictions instead, the analysis referred to Def (2016) that are accounted as follows: activity rate for 15-64 age group will be equal to 70.2% in 2060¹¹¹; unemployment rate will be reduced in 2060 achieving an amount equal to 5.5%¹¹²; employment rate equal to 65.9% in 2060¹¹³; national productivity will increase to nearly 1.6 in 2050 for then decrease by 0.1 percentage points during the next decade¹¹⁴; real GDP will be equal to 1.5% in 2060¹¹⁵.

According to forecasts of demographic and macroeconomic components of the national baseline scenario, is possible to observe what will be the trend of pension expenditure in terms of GDP in the long run. In fact, as shown in the Figure 3.6, the trend in pension expenditure can be described by dividing this ratio into four periods:2000-2013, 2014-2029, 2030–2044, 2045-2060.

¹¹¹ The increase of this rate during the 2015-2060 period is mainly due to both the growth in the participation rate of older workers is the increase in the female component in the labor market. In particular the first phenomenon comes from the exit postponement from the labor market due both to the raising of the retirement age and the relative contribution payments.

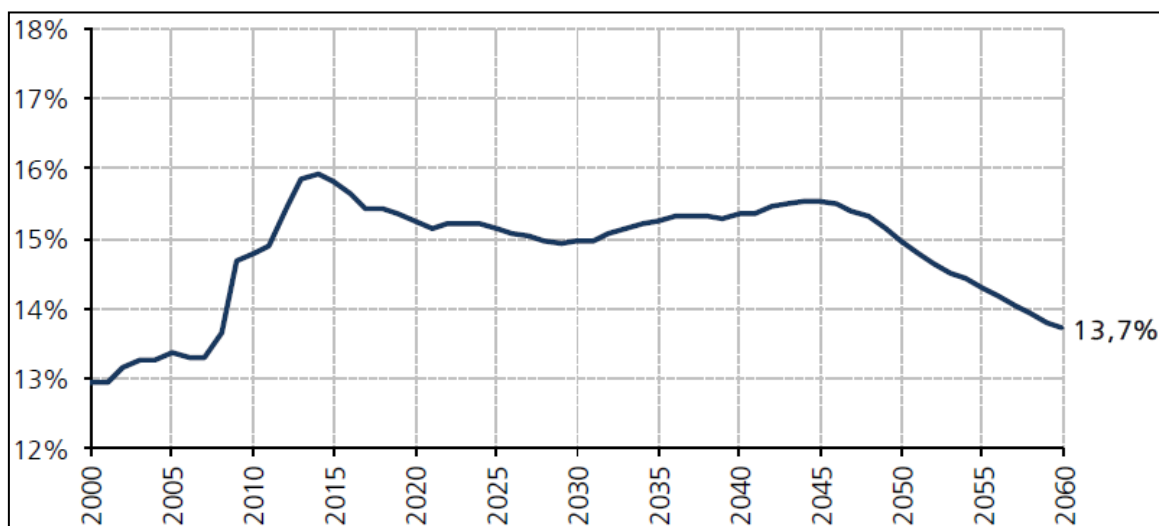
¹¹² Until 2020 predictions say that this rate will increase reaching the peak of 9.6% for the increase to 7.4% in 2030.

¹¹³ The trend in this rate comes from the change of macroeconomic indexes just analyzed above.

¹¹⁴ The description of productivity estimation can be found on RGS 2016,

¹¹⁵ The average increase of real GDP comes mainly from the employment growth and the productivity growth. The inflation rate will be equal to 2% from 2020.

Figure 3.6. Pension expenditures on GDP with national baseline scenarios (%)



Source: RGS (2016)

In the first period, the ratio grown in intensity especially in the period 2008-2009 following the acute phase of the economic crisis. However even in the subsequent five-years period the relationship continued to grow due to the negative performance of the GDP. In the second phase (2014-2029) the pension expenditures and GDP relationship will start to decrease until 2029. This trend probably is the result of the combination of both the raising of the minimum requirements for access to the pension system and the application of the pro-rata contribution system. In this case the economic growth generated through the employment and productivity growth doesn't seem to affect due to the offsetting of the first negative effect of demographic transition¹¹⁶. In the third period instead, the pension expenditures ratio will start to increase again due to the combination of the increase of the number of retirees of baby boom generation and the increase in life expectancy ratio even if this latter seems to be opposed by the higher minimum retirement requirements. The fact that baby boomers affect so much on pension expenditure lies in the fact that in this period will be entitled to retirement the last cohorts of people with mixed computing system and only at the end of this period will enter completely operative the contribution system. Finally, in the last period, it is expected that pension expenditure will start again to decrease due both to pensions completely liquidated with the contribution system, the adaptation of requirements of pension entitlement to the life expectancy of access and finally the reduction of the ratio between pensions on employed persons, this latter caused by the gradual elimination of the baby boom generations.

¹¹⁶ During these years in fact the old age dependency ratio will increase due to the pension entrance of baby boomers.

Now, after describing the demographic and macroeconomic forecasts and the relative impact on pension expenditures on the national baseline scenarios, it is interesting to develop a sensitivity analysis in order to verify what components influence considerably on the pension expenditures. RGS (2016) developed two levels of sensitivity analysis. In the first level it analyzed the impact on the pension expenditures of two alternative demographic scenarios than that of national baseline (high and low scenarios) with the objective to verify what is the impact with an increase/ decrease of all demographic and macroeconomic components. In the second sensitivity level it analyzed the impact of each individual demographic and macroeconomic component, with the objective to verify what components better improve the pension expenditures on GDP relationship. In this latter case it is also possible to understand if the variable of our interest, namely migrant variable, affects in a consistent manner on this relationship. However in both levels, all parameter changes will be applied from 2016.

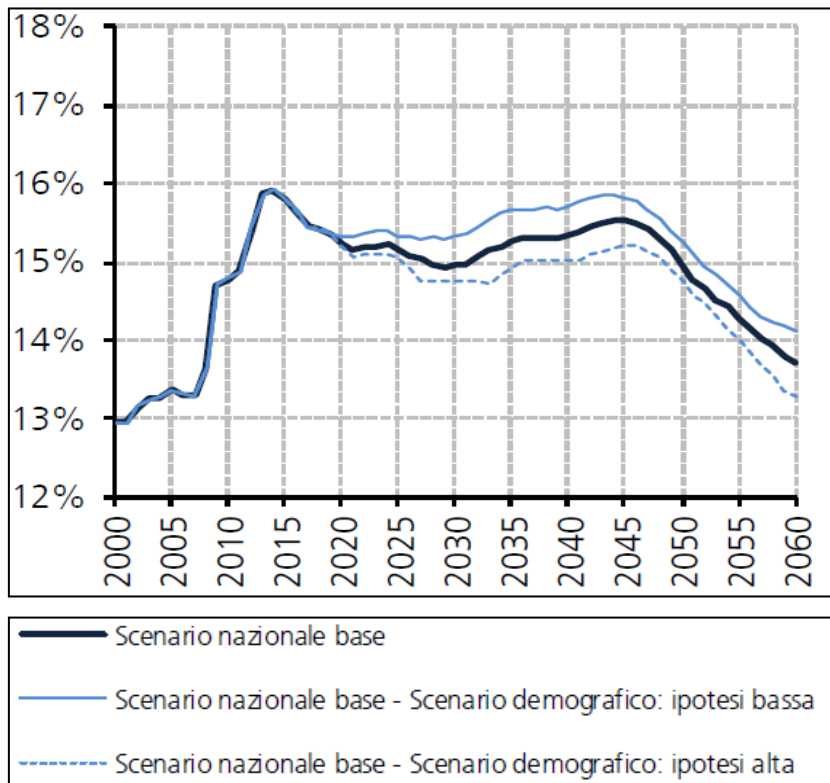
For the first level sensitivity analysis the **high scenarios** will have all components increased than the national baseline scenario components in this way:

- Increase of net migration of 40.000 per year on average, equal to 20.000 units per year in the initial period of the forecast and about 60,000 units per year in the final period.
- Increase of the fertility rate of 0.20 children per woman in 2060.
- Increase of life expectancy rate to 1.9 years for men and 2.3 years for women in the final period of the estimation

The **low scenarios instead**, will have an opposite variation sign than the high scenarios and will not be perfectly symmetrical to this latter. In fact, it is expected a decrease of demographic components respect to demographic components of national baseline scenarios for:

- Reduction of net migration of 40.000 per year on average, equal to 20.000 units per year in the initial period of the forecast and about 60,000 units per year in the final period.
- Reduction of the fertility rate of 0.22 children per woman in 2060
- Reduction of life expectancy rate to 2.1 years for men and 2.5 years for women in the final period of the estimation

Figure 3.7. Pension expenditures on GDP in the high and low scenarios (%)



Source: RGS (2016)

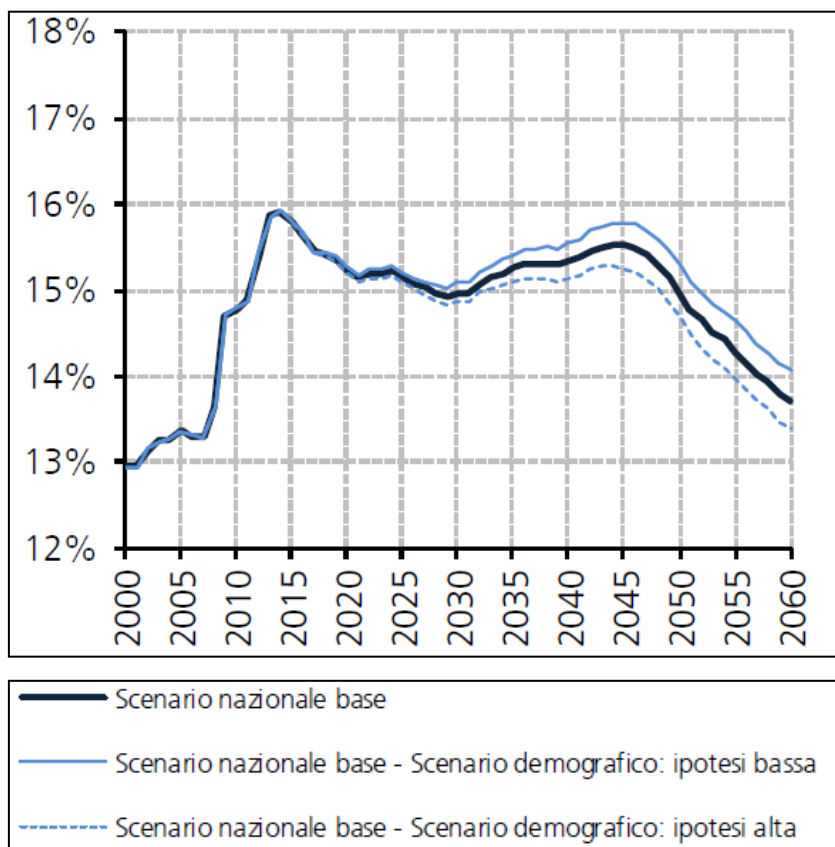
As shown in the figure 3.7, the high scenario assumptions produce a gradual improvement in pension expenditure in terms of GDP until 2033. This is mainly due to the reduction of the ratio of the number of pensions and number of employed Strengthened by major migratory flows and raising the minimum requirements access to retirement linked to life expectancy. In the following years instead of pension expenditure started to rise until 2045 and then again to decrease. This second phase is justified by the fact that foreigners of migration flows will turn into pensioners in this period and the increase in the average age of retirement will result in higher pension amounts paid to individuals¹¹⁷.

Similar considerations, but of opposite sign can be made for the low scenario assumptions. The effect of this latter scenario on pension expenditure is broadly equivalent indeed, although there isn't a perfect asymmetry in absolute value of the individual demographic variables.

The second sensitivity level instead analyses the impact of every single demographic component in the pension expenditures on GDP. However, analyzing the single variable of our interest, namely the migration flow, reveals the following conclusions.

¹¹⁷ Due to the increase of the contributory seniority and the transformation coefficient.

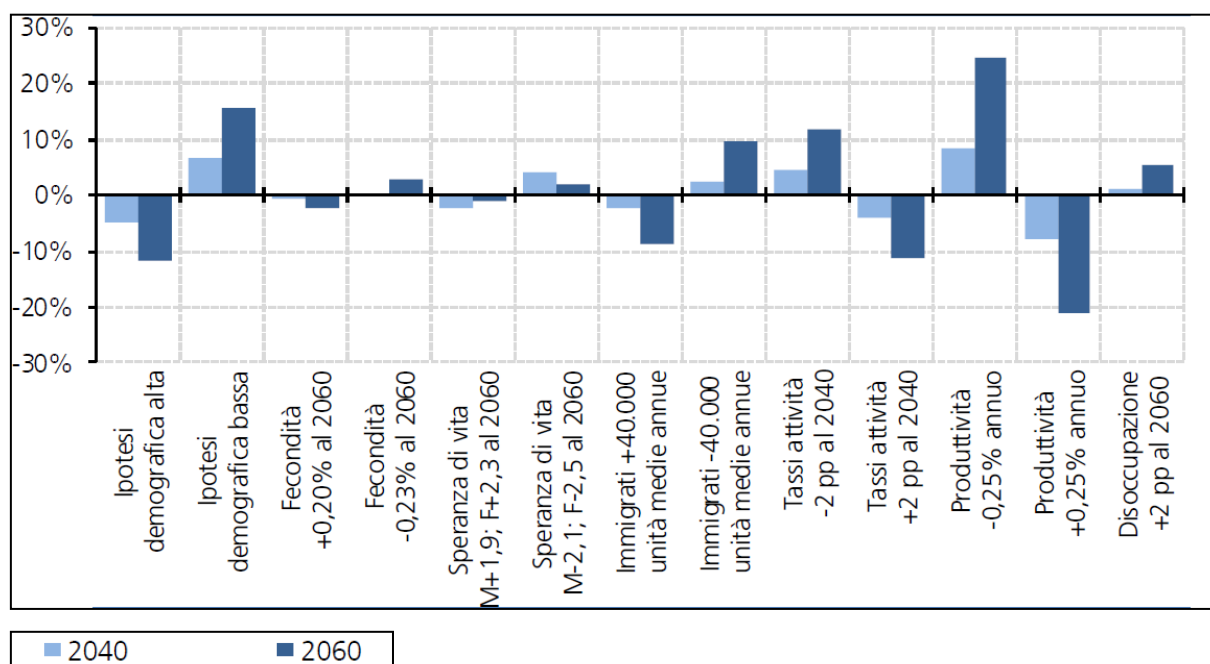
Figure 3.8. Pension expenditures on GDP according to different migration flows (%)



Source: RGS (2016)

As shown in the figure 3.8, a variation on migration flows has an immediate effect on employment and a delayed effect on pensions of about 30-35 years. In particular, in the case of a reduction of about 40.000 units per year, it determines a gradual raising of the ratio between pension expenditure and GDP generating respect to the national baseline scenarios a difference which tends to stabilize around 0.3-0.4 percentage points towards the end of the forecast period. Conversely, an increase in migration flows of around 40.000 units per year generates a reduction in pension expenditure of about 0.2 percentage points in 2040 and of around 0.3 percentage points in 2060 compared with that of the national baseline scenarios. As a result is possible to say that an decrease in migration impacts in absolute values compared to an increase of the same flows.

Figure 3.9. Sensitivity analysis - cumulative differential effect of every demographic and macroeconomic components on the national baseline scenario pension expenditures (%)



Source: RGS (2016)

Finally, making a brief sensitivity analysis on all the demographic and macroeconomic variables taken into consideration, it is possible to observe that the pension expenditure in terms of GDP tends to decline especially with a high productivity rate. However, although to a lesser extent, a positive impact on reducing pension spending even the hypothesis of a high scenario and the hypothesis of a high rate of activity in the labor market. At the individual level, the demographic variables do not have a big impact on the reduction of pension expenditures, except for the migration variable, which compared to the others seems to have a more positive impact. However, as discussed previously, under the best circumstances, namely that migration flows should increase to about 40.000 units per year, they generate a reduction in pension expenditure of only 0.3 percentage points on GDP in 2060. This result therefore contrasts with the claims of some analysts, who argue that the entry of 400-500 net migration per year would reduce pension spending¹¹⁸.

There is therefore the need for a policy which aims to strengthen the contribution of immigration to the sustainability of state budget and the pension system by raising the levels of control in the labor market and reducing inequalities. But also to develop policies to increase productivity and social policies to protect every person with very low pension benefit or those that in the working life receive low wages.

¹¹⁸ As well as the potential costs related to the difficulty of integration of so large flows.

CONCLUSIONS

The aim of this dissertation is to study whether and to what extent immigrants contribute in fiscal terms to the State Budget of the country they settle in. Particular attention is paid to foreigners' contribution to the sustainability of the Italian pension system.

At European level, the findings highlighted that the fiscal impact of migration in terms of GDP is insignificant, never exceeding, positively or negatively, the 0.5% of national GDP.

At the Italian level, net contributions of migrant resident population to the State Budget are positive and equal to 3.1 billion € and 0.3% of GDP in 2013.

It's interesting to note that the influence of migrants on the public purse varies according to nationality. On the one hand Chinese people contribute the most to the regional budget because they declare much higher average incomes than other nationalities. On the other hand Moroccan immigrants exercise the worst effect on the regional budget.

As far as the immigrant contribution to the Italian pension system is concerned, in 2014 the number of native retirees financed by foreigners was 640.000, considering an average native pension income equal to €17.031.

Furthermore, we observe that the so-called "differenziale pensionistico", meant as the number of Italians in retirement age for every immigrant in the same age condition, was 46 to 1 over the period 2011-2015, will be 27 to 1 in the time frame 2016-2020 and 19 to 1 over 2021-2025. These results rely on the assumption that retired foreigners remain in the host country for the rest of their lives. However, their permanence is uncertain and some academics have developed the following 2 hypotheses: they come back to their home country, maintaining at the same time the citizenship of the destination country, thereby benefiting from its social assistance; they leave permanently the nation.

Given immigrants' very low wages, poverty risk after retirement is very high and this may worsen public expenditure.

The sensitivity analysis of Ragioneria Generale dello Stato highlights that a variation on migration flows has an immediate effect on employment and a delayed effect on pensions of about 30-35 years. In particular, in the case of a reduction of about 40.000 units per year, it

determines a gradual raising of the ratio between pension expenditure and GDP generating respect to the national baseline scenarios a difference which tends to stabilize around 0.3-0.4 percentage points towards the end of the forecast period. Conversely, an increase in migration flows of around 40.000 units per year generates a reduction in pension expenditure of about 0.2 percentage points in 2040 and of around 0.3 percentage points in 2060 compared with that of the national baseline scenarios.

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